

IT'S WHO YOU ARE: EXPLAINING THE
ANTECEDENTS OF NEW CEOS'
PSYCHOLOGICAL PROFILES

By

CARLOS ARTURO SERNA GARCINI

Bachelor of Science in Mathematics
Instituto Tecnológico Autónomo de México
Mexico City, Mexico
2010

Master of Science in Business Administration
Instituto Tecnológico Autónomo de México
Mexico City, Mexico
2013

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
In partial fulfilment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
July, 2018

IT'S WHO YOU ARE: EXPLAINING THE
ANTECEDENTS OF NEW CEOS'
PSYCHOLOGICAL PROFILES

Dissertation Approved:

Dr. Federico Aime

Dr. James Pappas

Dr. Cynthia Wang

Dr. Karen Flaherty

Name: CARLOS ARTURO SERNA GARCINI

Date of Degree: JULY, 2018

Title of Study: IT'S WHO YOU ARE: EXPLAINING THE ANTECEDENTS OF NEW
CEOS' PSYCHOLOGICAL PROFILES

Major Field: BUSINESS ADMINISTRATION

Abstract: Given the breadth of implications that CEO psychological characteristics have for their organisations, in this manuscript I examine those characteristics as outcomes of the new CEO selection process. At the core of this theory is the realization that organisational successions may select executive types based on particular configurations of characteristics that respond to their governance, competitive, or performance needs. I first develop a typology of CEO psychological profiles (the *Independent Hero Leader*, The *Collaborative Champion Leader*, the *Classic Administrator Leader*, and the *Landmark Individualist Leader*) by cluster analysing a sample of 250 S&P 500 CEOs for which relevant psychological characteristics (i.e., narcissism, charisma, regulatory focus, honesty-humility, Machiavellianism, assertiveness, social influence, political skill, and pro-activeness, CSE, individualism and collectivism) were assessed with psychometrically valid scales utilising a videometric approach. Then, I hypothesize that a number of firm, board, and industry characteristics significantly affect the psychological profiles or types selected for new CEO appointments.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
II. LITERATURE REVIEW	5
Strategic Leadership.....	5
CEO Psychological Characteristics and Performance	6
CEO Psychological Characteristics and Firm Action.....	7
III. DEVELOPING A TYPOLOGY OF CEO PSYCHOLOGICAL CONFIGURATIONS.....	11
Methods.....	12
Sample and Data Collection.....	12
Selection of Psychological Characteristics	13
Analysis.....	14
Similarity Functions.....	14
Distance and Similarity Coefficients for Individual Observations	15
Hierarchical Clustering	16
Nonhierarchical Clustering	18
BIRCH and Polyetapic Clustering	19
Bayesian Information Criteria (BIC)	22
Optimum Number of Clusters in Two-Step Cluster Analysis	23
Identifying the Number of Typologies Available	24
Interpretation of Typology	28
The Nomological Network of the Leader Typology.....	36
Leadership and Behaviours.....	37
Leadership and Personality Traits.....	39
Leader Typology and Leadership Styles.....	41
IV. TOWARD A THEORY OF CEO SELECTION BASED ON PSYCHOLOGICAL CONFIGURATION	43
Literature Review of CEO Selection	43
Board Characteristics	44
Industry Characteristics	45
Firm Characteristics	46
Antecedents of Selection of the Types of CEO Psychological Configurations.....	47
Board-Level Antecedents.....	47
Industry-Level Antecedents	49
Firm-Level Antecedents.....	52

Chapter	Page
V. METHODS	57
Sample and Data Collection.....	57
Variables	58
Dependent Variable	58
Independent and Control Variables	58
Analysis.....	58
The Multinomial Logistic Regression Model	59
Goodness of Fit	61
VI. RESULTS	62
VII. DISCUSSION AND FURTHER RESEARCH.....	72
Future Directions	75
REFERENCES	77
APPENDIX.....	88

LIST OF TABLES

Table	Page
1. Cases with Nonsignificant p Values for Pairwise Tests for Difference in Means between Clusters for Behavioural Attributes by Two-Step Clustering Procedure	26
2. Descriptive Statistics and Correlation Matrix.....	63
3. Variance Inflation Factors (VIFs).....	65
4. Probit.....	66
5. Multinomial Logit (Classic Administrator Leader)	67

LIST OF FIGURES

Figure	Page
1. Complete Linkage Method's Dendrogram for Hierarchical Clustering	25
2. Ward Method's Dendrogram for Hierarchical Clustering	25
3. Biplot to Visualise Psychological Configuration of the Archetypes Developed ...	27
4. Matrix Scatter Plot with Identified CEO Archetypes	28

CHAPTER I

INTRODUCTION

Researchers in management have shown that the characteristics of top executives, especially CEOs, affect organisational decisions, behaviours, and outcomes (Chatterjee & Hambrick, 2007; Finkelstein & Boyd, 1998; Petrenko et al., 2001, Zajac & Westphal, 1996). A considerable share of this literature focuses on how CEOs' psychology, their preferences, and their underlying psychological dispositions influence firm-level strategic actions such as risk taking (Chatterjee & Hambrick, 2011) and corporate social responsibility (Petrenko et al., 2016; Wowak et al., 2016). Other work focuses on how CEO characteristics (e.g., humility) affect the internal workings of top management teams (Ou et al., 2014; Peterson et al., 2003). Further, researchers also consider the organisational consequences of CEOs' characteristics by examining how their traits affect organisational performance (Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997; Malmadier & Tate, 2009; Patel & Cooper, 2014; Petrenko et al., 2016).

Given the breadth of implications that CEO psychological characteristics have for organisations, it is surprising that almost no research has devoted attention to such characteristics as outcomes of new CEO selection process. The CEO succession literature has produced many valuable insights by examining how a variety of firm (e.g., size,

performance, board composition) and industry factors (e.g., dynamism) influence the selection of CEOs from particular origins (e.g., insiders or outsiders) or particular demographics. For example, researchers find that outsider CEO successions are more likely in underperforming firms (Cannella & Lubatkin, 1993; Puffer & Weintrop, 1991) or when boards are dominated by outsiders (Weisbach, 1988) and board power leads to the selection of CEOs who were demographically similar to the board (Westphal & Zajac, 1996). But, to the best of my knowledge, the successions literature has remained mute about CEO psychology.

There may be at least three reasons for the theoretical and empirical silence about CEO psychological make-up in the succession literature. First, it has been standard to treat CEO psychology as a unitary trait phenomenon, trying to explain the effects of a single trait (e.g., narcissism or hubris) on organisational behaviours and outcomes; but it seems difficult to argue for a single characteristic to have strong effects on selection processes when the perceptions of leaders are hardly unidimensional. Therefore, succession research looking at CEO selection based on psychological characteristics would require researchers to examine a multidimensional psychological makeup, profiles, or types that integrate a variety of CEO psychological traits.

Second, and related to the previous point, researchers may be discouraged from assessing multiple CEO characteristics because of the challenges associated with measuring psychological traits in difficult-to-access populations like CEOs (Chatterjee & Hambrick, 2007; Petrenko et al., 2016). Third, much of the work on CEO psychological characteristics emanates from the upper-echelons perspective (Hambrick & Mason, 1984), which takes executive characteristics as a given lens through which executives process organisational and

environmental stimuli to make choices and therefore does not include, even if it implies the consequences of, selection of CEO psychological characteristics in its logic.

The present study shifts attention to the organisational selection of CEOs with particular psychological make-ups. I specifically focus on a broad question: Do specific types of individuals (i.e., individuals with specific psychological configurations) typically occupy CEO positions? The equally or more important follow up question is: What predicts the types of individuals who will occupy CEO positions of particular firms and why?

To address these questions, in this manuscript I first develop a typology of CEO psychological make-ups by cluster analysing with a variety of techniques a sample of 250 S&P 500 CEOs for which 12 relevant characteristics (narcissism, charisma, core-self evaluations, regulatory focus (promotion and prevention), honesty-humility, Machiavellianism, assertiveness, pro-activeness, social influence, political skill, individualism, and collectivism) are assessed with psychometrically valid scales utilising the video-metric approach (Petrenko et al., 2016). My analysis produced four types of psychological configurations as representative of the CEO population in my sample that, based on their scores, aligned with prominent CEO archetypes: the *Independent Hero Leader*, whose psychological characteristics are closely aligned with the classic leader prototype described by Lord and colleagues (1986); the *Classic Administrator Leader*, whose traits are balanced and unextreme; *The Collaborative Champion Leader*, who is charismatic and leader like, yet humble; and the *Landmark Individualist Leader*, whose characteristics are representative of the self-interested manager archetype. Second, I theorise and test how a variety of firm and industry characteristics may influence selection of types from the emergent typology.

This manuscript makes three important contributions to the literature. First, it contributes to the literature on executive psychological traits by examining how specific CEO psychological trait configurations emerge from the examined CEO population. In doing this, I answer the need to take a more holistic view of CEO characteristics and open a potential door to examine configurational types in the upper echelons perspective. Second, I contribute to the literature on CEO succession by considering the psychological make-up of CEOs as an important outcome of the CEO selection process, an important outcome that has been previously overlooked and that can help align the literature more squarely with recent findings about the effects of psychological traits on the firms that new CEOs direct. Finally, it contributes to the measurement of CEO psychological make-ups by combining clustering approaches with the potential of videometric measurement as an unobtrusive measurement of a variety of CEO psychological traits to identify relevant CEO types.

CHAPTER II

LITERATURE REVIEW

Strategic Leadership

The Hambrick and Mason seminal piece (1984), which proposes that organisational actions and outcomes are a function of its top executives' characteristics, ignited interest in the impact that top executives', and in particular CEOs', personal characteristics have on their organisations. Because CEOs face highly ambiguous situations, their interpretation of situations, and in turn, their decisions and actions, are shaped by their own personal characteristics, including their values, experiences, education, and psychological traits (Finkelstein et al., 1996; Hambrick, 2007a). Due to the practical difficulty of obtaining accurate self-report data on sensitive psychological and personal characteristics from CEOs (Cycyota & Harrison, 2006; Hambrick, 2007b), early research adopting an upper echelons perspective focused on examining how easily observable and identifiable demographic characteristics, serving as proxies for deeper characteristics, shape executives' decision-making (Thomas et al., 1993; Simsek, 2007; Wright et al., 2002; Zhang & Rajagopalan, 2010). However, the use of unobtrusive approaches has allowed more recent work to focus on the underlying psychological characteristics that drive CEO decision-making and strategic actions.

Since then, aided by unobtrusive approaches, the study of CEO psychological characteristics has become a burgeoning topic in strategic management with no signs of waning. Several scholars have used unobtrusive measures to investigate the individual effects of a variety of psychological characteristics, including narcissism (Gerstner et al., 2013; Patel & Cooper, 2014; Petrenko et al., 2016), charisma (Fanelli et al., 2009; Wowak et al., 2016), core self-evaluation (Resick et al., 2009), and regulatory focus (Gamache et al., 2015) on firm actions and outcomes.

CEO Psychological Characteristics and Performance

During the late 1970s, a trend of examining how CEOs influence firm performance and strategy began as the media placed a spotlight on CEOs and their achievements as they often control firms that impact society on a daily basis (Khurana, 2002; Rein et al., 1987). This spotlight shifted scholars' focus to uncovering the extent to which performance may be ascribed to CEOs with particular psychological characteristics (Finkelstein, 2009; Meindl et al., 1985) or the distinctive CEO psychological characteristics that draw CEO social acclaim (Hayward et al., 2004). However, some of this literature suggests that certain CEO psychological characteristics have little effect on performance outcomes (Milbourn, 2003; Wade et al., 2006). On the other hand, more recent studies demonstrate that CEO characteristics substantially influence firm performance (Hambrick & Quigley, 2014; Quigley & Hambrick, 2015). For example, several studies show that CEO narcissism, characterised by a grandiose self-view, has considerable impact on firm financial performance (Chatterjee & Hambrick, 2007, 2011; Patel & Cooper, 2014; Petrenko et al., 2016). Chatterjee and Hambrick (2007) find that firms with narcissistic CEOs experience more performance volatility, while Patel and Cooper (2014) find that financial performance of firms with

narcissistic CEOs bounce back more quickly after times of economic downturns. Scholars also posit that CEOs' core-self evaluations (CSE), beliefs about their self-worth and abilities, and in particular hyper-CSE, may also lead to more performance volatility (Hiller & Hambrick, 2005; Li & Tang, 2010).

Other psychological characteristics, namely charisma and humility, are posited to lead to more consistent positive performance. Substantial scholarly attention has highlighted the notion that charisma, characterised by the ability to incite enthusiasm, is an important CEO characteristic that fosters follower excitement, engagement, and buy-in to organisational goals that in turn may positively influence firm performance (Avolio & Yammarino, 2013; House, 1976; Conger, 1988; Conger & Kanungo, 1987, 1998; McCall, 1986; Shamir et al., 1993). CEO humility has garnered increasing attention in recent years (Ashton & Lee, 2009; Ou et al., 2014, 2015; Owens et al., 2013), with studies showing that humble CEOs, who are characterised by their transcendental view of self and openness to feedback, empower their employees, which promotes participation of both top and middle managers while increasing information sharing across all levels of the organisation (Ou et al., 2014; Simsek et al., 2005; Guillén & González, 2001; Hackett & Wang, 2012). These positive effects of CEO humility increase organisational integration, which is suggested to lead to positive firm performance (Seo et al., 2015).

CEO Psychological Characteristics and Firm Action

Although recent research shows that CEOs can have substantial performance effects on their firms, scholars also acknowledge that firm performance is a “distal outcome” that is not only affected by the CEOs' decisions but also several different confounding factors beyond the CEO's control (Hambrick & Quigley, 2014; Hannan & Freeman, 1977). Thus, a

complementary stream of upper echelons research explores the effects of CEO psychological characteristics on more proximal outcomes such as the strategic or social responsibility actions a firm undertakes (Chatterjee & Hambrick, 2007; 2011; Gamache et al., 2015; Hayward & Hambrick, 1997; Petrenko et al., 2016; Wowack et al., 2016).

Several studies examine how CEOs' psychological characteristics influence strategic change and dynamism. For instance, Wowak et al. (2016) demonstrate how CEO charisma has a positive impact on strategic dynamism with a negative moderating effect of tenure (Wowak et al., 2016). Sanders and Hambrick (2007) suggest that the hubristic behaviour that accompanies inflated egos, falling under the overarching construct of hyper-Core Self Evaluations (CSE) in CEOs, may lead organisations to take unnecessary risks that could turn into unfavourable outcomes for the firm, thus damaging stakeholders (Sanders & Hambrick, 2007) and even ruining their own careers (Hayward, 2007). Likewise, Hiller and Hambrick (2005) posit that CEO hyper-CSE leads to faster, less exhaustive, more centralised decision-making processes and higher likelihood of larger possible losses. Furthermore, Chatterjee and Hambrick (2007) find that narcissistic CEOs engage in more strategic dynamism.

Moreover, psychology literature suggests that motivational psychological characteristics, specifically regulatory focus, may be one the most powerful influencers on behaviour (Barrick et al., 2002; Lanaj et al., 2012). The psychological construct of regulatory focus is comprised of two distinct dimensions, promotion and prevention. A promotion focus is essentially motivation for advancement, aspiration, and accomplishment. In other words, individuals act or play their roles as a means to win. On the other hand, a prevention focus is essentially motivation for preventing losses. Prevention focus is associated with an individual

who expects not to lose, that is, a prevention focus approach is associated with a preference for vigilance, protection, responsibility, and safety (Higgins & Spiegel, 2004).

An individual's regulatory focus is a strong driver of behaviour. Those with a stronger promotion focus are more likely to respond faster to opportunities that may arise and are also more likely to engage in experimentation and risk-taking in order to accomplish their desires and goals. In contrast, individuals with a stronger prevention focus will tend to engage in a careful and systematic decision-making process (Higgins & Spiegel, 2004). Few studies explore the impact of regulatory focus on strategic decision and outcomes; notable ones are work done by Brockner and colleagues (Brockner et al., 2004; Brockner & Higgins, 2001) within the context of entrepreneurial decisions and Gamache and colleagues' work (2015) in the context of acquisition decisions. Brockner's studies, for example, address the impact of regulatory focus on entrepreneurship, as the authors claim that different stages in the entrepreneurial process take advantage of different regulatory foci. The argument takes its foundation in the fact that a strong promotion focus aids people to better lead the entrepreneurial endeavour by easing the process of innovation and acquiring resources. On the other hand, a strong prevention focus helps executives stay away from errors with sunken costs and thus helps them be more effective in evaluating ideas and scenarios by conducting a more exhaustive and careful analysis (Brockner et al., 2004). Gamache et al. (2015) find that firms led by CEOs with a strong promotion focus not only engage in more acquisitions but also larger, in terms of value, acquisitions. Firms with CEOs with a strong prevention focus engage in fewer acquisitions, and smaller, in terms of value, acquisitions. It is also important to note the fact that because promotion and prevention foci involve different levels

of risk acceptance, they reshape the impact of how individuals respond to a wide range of compensation schemes (Wowak & Hambrick, 2010; Brockner & Higgins, 2001).

CHAPTER III

DEVELOPMENT OF A TYPOLOGY OF CEO PSYCHOLOGICAL CONFIGURATIONS

With the proliferation of research focusing on individual CEO psychological characteristics, scholars have recently called for exploration of the interplay among CEO characteristics (Wang et al., 2016). Answering this call involves exploring how psychological characteristics interplay to create different psychological configurations within the CEO population. Since it is unlikely that a firm chooses a CEO based solely on their possession of one particular psychological trait, the development of these types of psychological configurations would open up the door for researchers to examine executive psychology as an outcome of the CEO selection process. Given the important influence of CEO psychological characteristics on both firm actions and performance, there is a need to further understand how individuals with particular psychological configurations are selected to lead their specific firms. The first step in addressing this void is developing a typology of CEO psychological configurations.

Methods

Sample and Data Collection

I leverage a dataset of third-party student ratings of the publicly available video data of 250 S&P 500 CEOs to obtain the measures the CEO psychological characteristics with crossed independence between raters and measurements. To avoid content that may bias raters, these videos were edited, removing any identifying information (e.g., name or title of CEO or firm) and discussion of confounding topics such as firm performance or reputation as well as stigmatic events (e.g., job lay-offs; corporate scandals, political issues, environmental disasters). Additionally, these video segments were chosen or edited to exclude any individuals who were not the target CEO. Consistent with Petrenko and colleagues (2016), who determined that videos lasting approximately 2 minutes 30 seconds have optimal validity, these videos have the same approximate video length, with slight variations only to avoid abruptly cutting-off a CEO in mid-sentence (Gupta & Misangyi, In Press).

This approach offers several benefits. First, because it is a direct yet unobtrusive means to measure CEO characteristics (Petrenko et al., 2016; Zhu & Chen, 2015), it avoids the reluctance of CEOs to participate in survey research (Chatterjee & Hambrick, 2007, 2011) thus providing access to a number of CEOs whose videos are becoming increasingly abundant online. Second, this approach affords the opportunity to measure the characteristics of CEOs with previously validated psychometric scales without concerns regarding low response rates or social desirability biases due to the sensitive nature of the psychological traits being measured (Cycyota & Harrison, 2006). Third, it avoids the criticism aimed at self-report measurements of psychological characteristics (Tangey, 2000). Rooted in the notion that observers can clearly identify targets' psychological traits (Connelly &

Hülshager, 2012), prior research finds that third-party ratings for measuring psychological characteristics have high operational validity (Oh et al., 2011) and avoid the inflation that is common with self-reports (Van Iddekinge et al., 2005).

Closely following the logic of the Petrenko et al. (2016) videometric approach, this approach used previously validated psychometric scales to collect data on the following measures: narcissism, measured using the Narcissism Personality Inventory (Ames et al., 2006); charisma, measured following Agle and colleagues (2006); core self-evaluations, operationalized consistent with Judge and Bono (2001); regulatory focus, operationalized following Judge and colleagues (2003), honesty-humility, measured using the Ashton and Lee (2009) H-factor scale; Machiavellianism, measured using the Machiavellian Personality Scale (Dahling et al., 2009); assertiveness, measured consistent with Ames and Flynn (2007); attractiveness, using the Walster et al. (1966) study; social influence, measured using Ames and Flynn (2007) research; political skill, according to Ferris and colleagues (2005); positive and negative appeal, measured consistent with Watson and colleagues (1988); individualism and collectivism, measured according to the Wagner (1995) scale; the Big Five measure using a short scale from Gosling and colleagues (2003); and pro-activeness, consistent with Seibert and colleagues (2001). To ensure consistent scaling, all psychological characteristics were assessed on their respective prevailing instruments using a seven-point Likert scale.

Selection of Psychological Characteristics

To identify the most relevant psychological characteristics for this particular study, I went through a process of presenting all of these potential characteristics to a panel of three experts on the psychology of leaders to discuss and select the final set of measures. Following the experts' opinions, a final set of 12 measures was identified. This final set

included: narcissism, charisma, core-self evaluations, assertiveness, Machiavellianism, proactiveness, regulatory focus (promotion and prevention), political skill, social influence, honesty-humility, individualism, and collectivism. I then utilised cluster analysis techniques to identify groupings of these characteristics and the partition of executives between the types that emerged from my analyses.

Analysis

Cluster analysis may be considered as a multivariate statistical technique that provides the user with a representation of groups within a prior set of individuals or variables proposing distance functions and choosing an appropriate algorithm to in order to identify groups among the latter. Cluster analysis may also be helpful when identifying outliers within a set of observations (Venables & Ripley, 2002). However, cluster analysis is not equivalent to classification analysis. When using classifiers, data has previously been assigned a group or a family and the main objective relies on determining where a new observation should be set. Once again, cluster analysis has no previous information on the number of groups to be identified and it searches for natural group structures in the data in order to describe these (Anderson, 2001). Before introducing different cluster analysis methods, it seems appropriate to define a similarity measure or a distance function.

Similarity Functions

Similarity functions or measures may be treated differently when the main objective is to work in grouping individuals or variables. In the first case, similarity between two observations or individuals may be measured by a distance function. On the other hand, when dealing with variables as a main clustering unit, similarity is often measured by using correlation coefficients.

Distance and Similarity Coefficients for Individuals or Observations

The case where the main objective is to group experimental units or individuals shall be discussed as it is the nature of the analysis in this study. For this, consider individuals with quantitative attributes being measured. Let these variables of interest or attributes possess at least interval scales of measurement. Let the vectors $x' = (x_1, \dots, x_p)$, $y' = (y_1, \dots, y_p)$ be two p -variate vectors representing p measurements for two individuals within a population or sample. The following are some of the most commonly used distance functions for acknowledging similarity between the latter (Johnson & Wichern, 2007).

- Euclidean distance:

$$d(x, y) = \sqrt{(x - y)' (x - y)}$$

- Mahalanobis' distance:

$$d(x, y) = \sqrt{(x - y)' A (x - y)}$$

where, $A = S^{-1}$ or well the inverse of the covariance matrix S .

- Minkowski's metric:

$$d(x, y) = \left(\sum_{j=1}^p (x_j - y_j)^m \right)^{\frac{1}{m}}$$

where m is a positive integer. Notice that if $m = 2$ then $d(x, y)$ reduces to the Euclidean distance.

- Canberra's metric:

$$d(x, y) = \sum_{j=1}^p \frac{|x_j - y_j|}{x_j + y_j}$$

- Czekanowski's metric:

$$d(x, y) = 1 - 2 \frac{\sum_{j=1}^p \min\{x_j, y_j\}}{\sum_{j=1}^p (x_j + y_j)}$$

Hierarchical Clustering

Hierarchical methods achieve grouping of a set of either individuals (observations) or variables by iterative unions or divisions of clusters. These are agglomerative or divisive methods. Agglomerative methods will start considering as many clusters as individuals there are within a set. Then, similar clusters are joined together until all clusters have been grouped into one and only one cluster.

On the other hand, divisive methods will consider one cluster formed by all observational units and start dividing the former by separating those clusters with larger dissimilarities. This process is iterated until each observation within a set forms one cluster.

Results of hierarchical clustering may be observed by a dendrogram; this is a graphical approach that shows a structure similar to those of dendrites, which also show the distance at which each cluster was either grouped or divided among other experimental units (Venables & Ripley, 2002). In practice however, agglomerative methods are more commonly used than divisive methods.

In order to work with hierarchical clustering algorithms, choosing an appropriate linkage method is required. This is, in other words, deciding upon a rule in which new clusters are to be formed and how to redefine distances within a pair of clusters. Suppose that (UV) and W are two clusters formed by U and V grouped into one single cluster and W in another one (Johnson & Wichern, 2007). The three main linkage functions are the following.

- Simple Linkage Method: The simple linkage method assigns distance measures between two clusters by minimising the distance of the newly formed cluster to the element that has not been part of the new grouping. This is,

$$d_{(UV)W} = \min\{d_{UW}, d_{VW}\}.$$

- Complete-Linkage Method: The complete linkage method assigns distance measures by maximising the distance from the newly formed cluster to all other experimental units by

$$d_{(UV)W} = \max\{d_{UW}, d_{VW}\}.$$

- Average Linkage Method: Average linkage method uses the mean distance of the elements of the newly formed cluster to all other experimental units to reassign distance coefficients,

$$d_{(UV)W} = \frac{d_{UW} + d_{VW}}{2}.$$

- Ward's Method: In 1963, Ward proposed a method to join two clusters based on a minimisation criteria of the residual or sum of squares due to error. The process will assign new observations to a cluster by minimising the increase of error within each cluster E , where

$$E = \sum_{m=1}^g E_m$$

and

$$E_m = \sum_{l=1}^{n_m} \sum_{k=1}^{p_k} (x_{ml,k} - \bar{x}_{m,k})^2.$$

Thus, $\bar{x}_{m,k} = \frac{1}{n_m} \sum_{l=1}^{n_m} x_{ml,k}$ stands for the mean of the m th in the k th variable and

$x_{ml,k}$ is the k th variable for the l th experimental units in the n th cluster.

This is, if there are N individuals or variables, the agglomerative hierarchical method's algorithm takes place as follows (Afifi et al., 2012; Johnson & Wichern, 2007).

1. Begin with N clusters, each with one individual or variable.
2. Identify those two elements with the shortest distance between them or the largest similarity measure. This can be denoted with no loss of generality by U and V .
3. Join clusters U and V in one single cluster (UV). Then recalculate the new distances (UV) and the other clusters by using the chosen linkage method.
4. Repeat (2) and (3) for the $N - 1$ clusters and iterate the algorithm until all observational units lie within one single cluster.

Nonhierarchical Clustering

Nonhierarchical methods, unlike hierarchical methods, are designed to structure cluster formations of individuals and not variables. It must be emphasized that these require that the number of clusters k has to be specified before the algorithm runs (Anderson, 2001).

Furthermore, it is not necessary to calculate the distance matrix of elements iteratively, nor does it require saving the distance matrix for each step of the clustering procedure, which makes it appropriate computationally for large databases. K -means comprises the most commonly used method for the nonhierarchical methods. K -means assigns all N elements arbitrarily into all K clusters to/from and defines a centroid as a p -variate vector containing the mean values for the observations for each cluster and reassigns individuals into that cluster whose distance is the closest. Formally, the algorithm for K -means follows.

1. Start with k initial clusters assigning all N individuals or experimental units arbitrarily.

2. Calculate the centroid for each one of the k clusters and reassign each individual to the cluster whose distance to its centroid is the least.
3. Repeat the last step in the algorithm until all individuals remain in their clusters and no reassignments are suggested.

Notice that the final grouping is dependant on the initial clustering and that the number of k clusters is decided with no criteria, which evaluates the natural grouping structure of the elements of interest. This is emphasised by the existence of outliers in samples that will cause clusters with large intragroup variances having clusters whose centroids are so close that differentiation between these will be uneasy. For this, I recommend validating the clustering structures formed for different values of k to check that no clusters are being formed where a natural differentiation does not exist (Everitt et al., 2011).

BIRCH and Polyetic Clustering

The two step clustering algorithm patented by SPSS, SPSS: 2 Step Cluster Analysis, is widely used in research and in industry and is based on the Balanced Iterative Reducing and Clustering Using Hierarchies (BIRCH) method proposed by Zhang, Ramakrisnon, & Livny (1996). It performs iterative sequential grouping as a first step in order to reduce the high-density regions formerly called preclusters. Afterwards, in a second step, the number of clusters is then reduced to an optimum number. I must emphasize that the maximum detail to be achieved is the case where one single observation is equivalent to a cluster. Notice that a large number of preclusters impacts computational costs of the method's second phase.

Therefore, the Two-Step Cluster Analysis algorithm developed by Chiu et al. in 2001 comprises a large-scale method able to work with quantitative and qualitative variables simultaneously. Based on the BIRCH method, it follows a two-step procedure where in the

first phase it forms preclusters out of the N observations available and then reduces the latter into a much smaller number of desired clusters. If the number of clusters is not known beforehand, then the algorithm proposes an optimum number of clusters automatically (SPSS Inc., 2001).

To illustrate this method, let $C \in M_{n \times k}$ be the original data matrix that contains the n observations for k variables of interest. This matrix may then be partitioned into two sub-matrices, $X \in M_{n \times p}$, that contain n observations for p continuous variables of interest to describe the clusters x_{ij} and $A_{n \times q}$, which holds records of the n observations for the q categorical variables of interest and where $k = p + q$. Notice that the procedure supposes that the continuous variables will belong to the i th cluster independently normally distributed with mean μ_{ij} and variance σ_{ij}^2 . For the case of the categorical data included in the analysis, observations belonging to the i th cluster are independent from the rest and distributed according to a multinomial probability mass function with parameters π_{ij} , where p_{lj} stands for the probability of being a member of the l -th category of the j -th variable.

The procedure may take into the analysis two distance measures simultaneously. The first one takes as a default measure Euclidean distance or log-likelihood based distance (Johann et al., 2004). Where mixtures of categorical and numerical data are gathered, then the algorithm proposes to use the log-likelihood distance. This is for any two clusters i and s , distance between these is defined as follows.

$$d(i, s) = \xi_i + \xi_j - \xi_{(i,s)}$$

where

$$\xi_i = -n_i \left(\sum_{i=1}^p \frac{1}{2} \ln(\hat{\sigma}_{ij}^2 + \hat{\sigma}_j^2) - \sum_{j=1}^q \sum_{l=1}^{m_l} \hat{\pi}_{ijl} \ln(\hat{\pi}_{ijl}) \right)$$

and

$$\xi_s = -n_s \left(\sum_{i=1}^p \frac{1}{2} \ln(\hat{\sigma}_{sj}^2 + \hat{\sigma}_j^2) - \sum_{j=1}^q \sum_{l=1}^{m_l} \hat{\pi}_{sjl} \ln(\hat{\pi}_{sjl}) \right).$$

Last,

$$\xi_{\langle i,s \rangle} = -n_{\langle i,s \rangle} \left(\sum_{i=1}^p \frac{1}{2} \ln(\hat{\sigma}_{\langle i,s \rangle j}^2 + \hat{\sigma}_j^2) - \sum_{j=1}^q \sum_{l=1}^{m_l} \hat{\pi}_{\langle i,s \rangle jl} \ln(\hat{\pi}_{\langle i,s \rangle jl}) \right).$$

Then, ξ_v may be interpreted as a measure of variance within cluster $v = i, s, \langle i, s \rangle$. The first part of the sum acknowledges variability regarding continuous variables, then $\hat{\sigma}_v^2$ corresponds to the decrease in the log-likelihood function when joining clusters i and s . The term $\hat{\sigma}_j^2$ is used to avoid degenerative cases if $\hat{\sigma}_v^2 = 0$. In a similar way the second term of the sum corresponds to the variance caused or induced by categorical variables in the data.

In a second phase or step of the algorithm, just as in hierarchical methods, clusters whose distance results least will be joined together to form a new cluster in every iteration of the process. Thus, the log likelihood function of the k th cluster step of the algorithm is calculated as:

$$l_k = \sum_{v=1}^k \xi_v.$$

The function l_k is not usual as it complies to determine variance within clusters. In the case where no quantitative variables are dealt with, the function l_k is therefore defined as the entropy among the k clusters.

Criteria based on statistics may be employed to determine the optimum number of clusters to be formed. In 1998, Fraley and Raftery proposed using Bayesian Information Criteria (BIC) or, in 1993, the Approximate Weight of Evidence (AWE) as criteria for choosing the optimum number of clusters when performing hierarchical clustering. Two-step cluster analysis suggests either BIC or Akaike's Information Criteria (AIC).

Akaike's Information Criteria is computed as

$$AIC_k = -2l_k + 2r_k$$

where r_k is the number of independent parameters to be adjusted in the model. The next subsection deals with a brief introduction to these criteria. For the purpose of this document, BIC's criteria will be emphasized.

Bayesian Information Criteria (BIC)

There are three main approaches to model selection in statistics. These are based upon:

- 1) optimization of a selection criterion,
- 2) hypotheses testing, and
- 3) ad hoc methods.

Due to the research interest of this document, I now discuss methods regarding optimization of selection criteria. These criteria are widely used in statistics for deciding which models approach reality or best describe data. Such is the case of linear models and criteria based upon minimising mean squared error such as Mallow's (1973) C_p or minimisation of the prediction error sum of squares (PRESS) developed by Allen in 1970 (Burnham & Anderson, 1998). Other renowned methods regarding optimization of certain criteria used in statistical analysis are those concerning $K-L$ information estimates or distance such as Akaike's AIC or Takeuchi's Information Criteria (TIC). Last but not the least method is optimization criteria based on deciding or estimating K where K is the dimension of the correct model such as BIC.

BIC is also known to be a k dimensional consistency criterion that is based on the following instances.

- The ideal or correct model exists and is being considered in the set of models being evaluated.
- The ideal or correct model corresponds to 1 with a relatively low dimension, that is, $1 \leq k \leq 5$.
- K does not depend on the sample size being considered; it remains constant.
- The probability of choosing the right or correct model converges to 1 when sample size increases. BIC was first exposed by Schwarz (1978) in a Bayesian context and is defined as $BIC = -2 \ln(L) + K \ln(n)$ where L is the corresponding likelihood function. Then the Kuhlback-Lieblers information $K-L$ is defined as the negative entropy:

$$E_f \left[\ln \left(\frac{f(x)}{g(x)} \right) \right] = \int f(x) \ln \left(\frac{f(x)}{g(x)} \right) dx.$$

This is achieving maximum entropy when minimising negative entropy. In a similar fashion, minimising $K-L$ information results from approximating a model with minimum loss of information or maximising uncertainty with the best goodness of fit in the model.

BIC is a Bayesian approach with the same number of *a priori* distributions in each model being considered and no informative distributions being considered in the parameters to be estimated in a given model. The purpose of this model selection criterion is prediction rather than understanding of phenomena (Afifi et al., 2012).

Optimum Number of Clusters in Two-Step Cluster Analysis

In the first phase of the two-step cluster algorithm, AIC or BIC are useful for determining the correct number of clusters to be taken into account. According to research performed by Chiu and colleagues (2001), the maximum number of clusters to be considered satisfies:

$$\frac{\text{BIC}_k}{\text{BIC}_1} = c_1$$

and by a rule of thumb or according to empirical results $c_1 = 0.40$.

In the second step of the algorithm, the ratio of distance among the k clusters is considered $R(k)$, with

$$R(k) = d_{k-1} - d_k$$

where d_{k-1} is the distance in the case where k joins to form a new structure with $k-1$ clusters. Then, d_k is defined in a similar way by

$$d_k = l_{k-1} - l_k$$

where

$$l_v = \frac{r_v \ln(n) - \text{BIC}_v}{2}$$

or

$$l_v = \frac{2r_v \ln(n) - \text{AIC}_v}{2}$$

for $v = k, k-1$. Thus, the change rate is calculated as

$$\frac{R(k_1)}{R(k_2)}$$

for the largest values of $R(k)$ obtained with the structures or clusters formed in the first step of the algorithm. This way the method suggests k_1 clusters if the ratio computed is greater than a constant $c_2 = (1.15)^4$ (Chiu et al., 2001). Otherwise, the optimum number of clusters to consider k is the one that yields the greater dimensionality of the problem,

$$\max\{k_1, k_2\}.$$

Identifying the Number of Typologies Available

Hierarchical clustering was performed using R (R Core Team, 2012) with the data in order to see the number of natural clusters or groups found in the CEO population. Two clustering procedures were analysed to verify findings by using complete linkage and Ward's

method with the Euclidean distance as they are two robust forms of generating clusters and the variance of the behavioural attributes are not that different overall. The output may be visualised in the two dendrograms exhibited in Figures 1 and 2. It may be seen that there are four natural clusters in the CEO population.

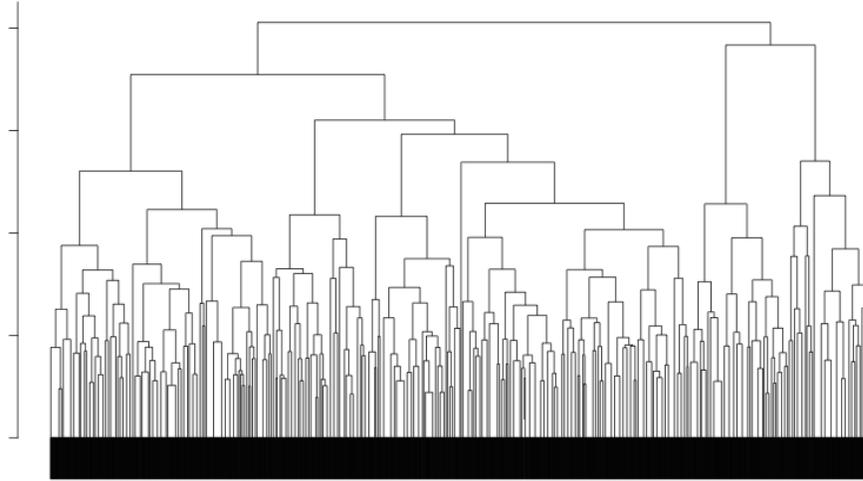


Figure 1. Complete Linkage Method's Dendrogram for Hierarchical Clustering

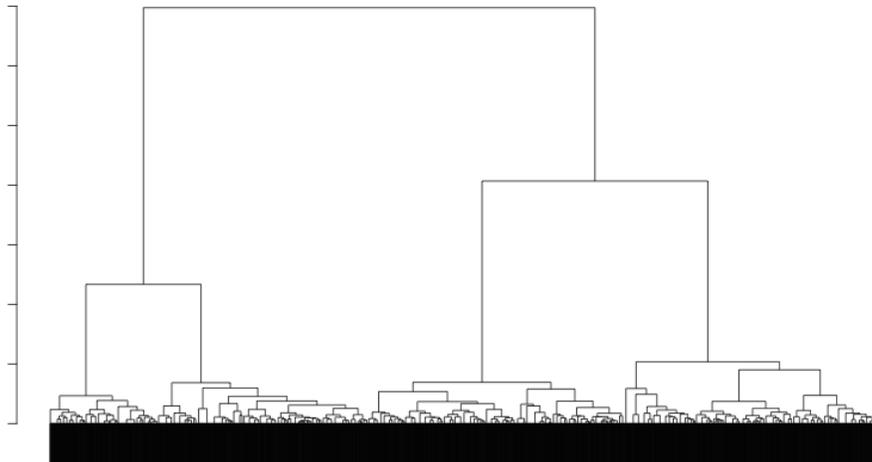


Figure 2. Ward Method's Dendrogram for Hierarchical Clustering

As all four methods, both the hierarchical using complete linkage and Ward’s method as well as that of nonhierarchical clustering and two-step cluster analysis, yield similar results, the next step was to validate that the differences in the mean within groups were statistically different between groups. For that, a series of pairwise test of hypotheses for differences in means were performed. Only seven cases yielded p values greater than 0.05 out of 78 tests, suggesting that no difference exists among that particular pair of attributes for two given clusters, taking two-step cluster analysis as a reference. They are displayed in Table 1.

Table 1. Cases with Nonsignificant p Values for Pairwise Tests for Difference in Means between Clusters for Behavioural Attributes by Two-Step Clustering Procedure

Trait	Cluster	Cluster	p Value	Test-Statistic
Prevention Focus	Collaborative Champion	Classic Administrator	0.17	13.7660
Social Influence	Collaborative Champion	Classic Administrator	0.27	-18.0920
Prevention Focus	Classic Administrator	Independent Hero	0.23	-1.1990
Honesty-Humility Factor	Classic Administrator	Independent Hero	0.50	-0.6840
Narcissism	Classic Administrator	Landmark Individualist	0.31	-1.0170
Political Skill	Independent Hero	Landmark Individualist	0.81	-0.2450
Social Influence	Independent Hero	Landmark Individualist	0.23	1.2045

Moreover, principal component analysis was performed in order to gain more insight on how the typology created is confirmed by the psychological traits of the individuals subject to analysis. Hence it may be clearly seen from Figure 3 how the four groups differ and how these are characterised by the way they possess different personality attributes by observing this in a graphic way.

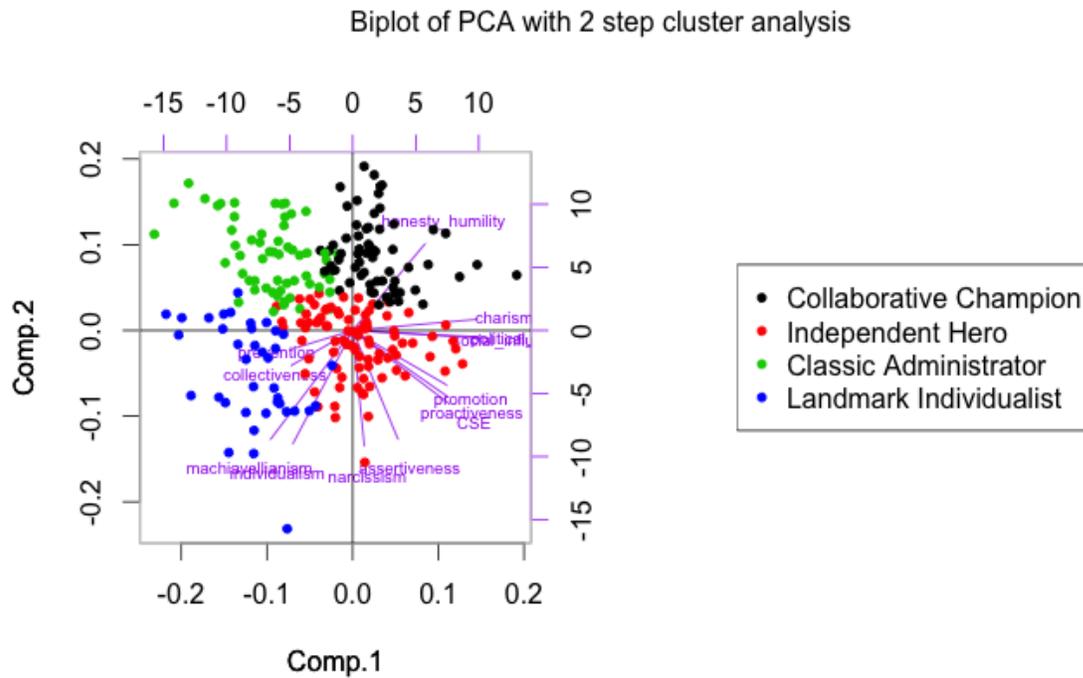


Figure 3. Biplot to Visualise Psychological Configuration of the Archetypes Developed

Figure 4 shows the relationship among behavioural variables, the density of the variable distribution and how clusters are interact pair-wisely. The scatter plots were computed using Wickham (2009). Notice how the four groups are clearly marked and differenced one from another. Although a slight skew to the right is appreciated, there is no evidence of lack of normality for the scores in behavioural attributes; there is no reason to be amazed as these were obtained by calculating the sample mean value out of a number of scores for several items.

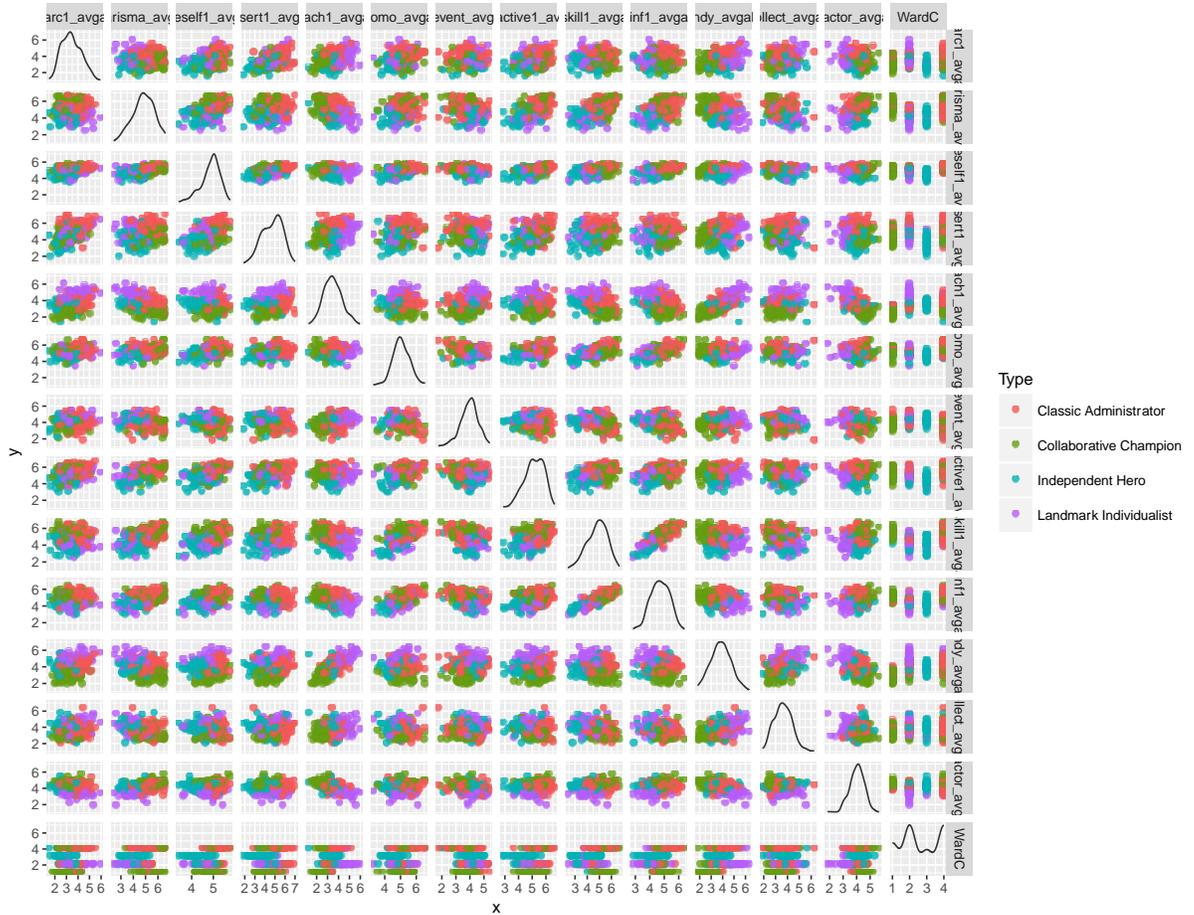


Figure 4. Matrix Scatter Plot with Identified CEO Archetypes

Interpretation of Typology

Based upon the theoretical underpinnings of the clusters, I label the four clusters as the *Independent Hero Leader*, the *Collabortive Champion Leader*, the *Landmark Individual Leader*, and the *Classic Administrator Leader*. It may be seen from Figure 3 that the first group of the typology proposed and to which I shall refer is the *Collaborative Champion Leader* and is often referred to as that CEO identified as the nice, loveable, and down-to-earth CEO who promotes top team management members' participation in decision-making processes and is prone to seek consensus with his colleagues and staff. The *Collabortive Champion Leader* may be thought of as the individual who embodies the often-acquainted

characteristics from transformational leadership literature as this CEO is perceived as a visionary and a diligent risk taker due to his high promotion and prevention focus (Higgins, 1997; Gamache et al., 2015). Thus, the regulatory focus principle is the basis for psychological motivation models (Higgins, 1998). Also, this CEO's psychological traits are thought to be higher on charisma, which may come in handy for organisations when underpinning labour uncertainty as the perception of a charismatic leader may generate cohesion within team members (Agle et al., 2006). Moreover, close or charismatic leadership may ease organisational dynamics within the firm in order to join efforts and coordinate to achieve a single target without causing disruption of strategy formulation and firm performance (Waldman et al., 2001). Cannella and Rowe (1995) (Cannella & Lubatkin, 1993). For example, when studying professional baseball teams, researchers concluded that a competitive context and socio-political processes affect succession. Jointly, an individual's high political skill increases effectiveness as this type of leader has developed the ability to persuade, influence, and control others (Ferris et al., 2005; Ahearn et al., 2004). It is no surprise then to notice that this archetype of CEO possesses high social influence. Hence, it's no surprise that this type of CEO is a leader who is thought to be inspiring and socially influential. Also, this group is high in CSE and pro-activity, which indicates that this CEO archetype is an individual who has acquired a job that is likely to satisfy his perceptions of identity and task variety (Judge et al., 2003). Therefore, this type of CEO assumes that his/her role played within the organisation has significance as to how to motivate and empower fellow subordinates, always seeking to get and provide feedback. Regarding decision-making, as stated before, consensus is the point that may generate that sparkle that makes things happen (Ahearn et al., 2004; Judge et al., 1997; Seibert et al., 2001). This

cluster's CEOs are the type of employees who are likely to be satisfied with their jobs. Now this CEO is thought to be high on honesty and humility; as the literature points out honesty and humility both influence performance through a greater awareness of strengths and weaknesses, providing more accurate information regarding resource allocation as well as the time and effort needed to accomplish performance-based tasks. Hence, a more humble and honest individual acknowledges his weaknesses and addresses efforts to gain enhanced social learning from strong performers as they are far more receptive to third-party feedback and therefore are more adaptive (Owens, 2009; Ou et al., 2014). Likewise, humble leaders tend to not claim single ownership of their success, but are more likely to acknowledge their gains as a joint team effort (Hambrick, 2007a; Chatterjee & Hambrick, 2011; Adler & Adler, 1989).

The *Collaborative Champion Leader* is therefore a decent and righteous individual with firm moral values. Several scholars suggest that humility, which is considered the opposite construct of narcissism (Tangney, 2000), will foster positive interpersonal relating (Exline et al., 2004). Hambrick and Chatterjee (Hambrick, 2007a) add that more humble CEOs are more likely to pursue incremental improvements and to have less variable performance than those CEOs reporting more narcissistic behaviour. Thus, the *Collaborative Champion Leader* is also characterised by being relatively low on narcissism. Although managers are not manipulative by nature, they do tend to act in social behaviour that makes them suitable for managing employees' behaviour and fosters organisational performance. This sort of practice requires planning and a thorough analysis of the possible scenarios in advance of making decisions. Recent studies show evidence of Machiavellianism being positively associated with assertiveness (Walter et al., 2005). Assertiveness is understood as a trait that outlines individual's tendencies to speak up for, defend, and proceed in their own interest, taking into

account their values, preferences, and goals (Costa & McCrae, 1992; Wilson & Gallois, 1993).

Highly assertive executives in organisations are generally perceived as more powerful rather than passive by their fellow peers; hence, they are advantageous in situations such as in negotiation matters as they are reluctant to make concessions (De Dreu et al., 2000; Galinsky & Mussweiler, 2001). Moreover, extant research establishes that although high levels of assertiveness may derive instrumental benefits, there is a downside to it as assertive leaders are often less likeable and less friendly than less assertive individuals. They may generate conflict when defending their points, even when a desirable output may come from it (Kern, 1982; Graziano et al., 1996). Thus, as the *Collaborative Champion Leader* CEOs are relatively low in assertiveness and Machiavellianism, they are not likely to make decisions based only on their own judgement (as they care about their team members' opinions) and without a reasonable decision-making process beforehand. They are not self-centred and will not try to manipulate or deceive others in order to accomplish their own goals as they are low in Machiavellianism (Dahling et al., 2009).

Another archetype of interest is that group or category that represents the sordid type of psychological characteristics in a CEO. This may be thought of as the *Landmark Individualist Leader* who, unlike the *Collaborative Champion Leader*, tends to be high on Machiavellianism, which suggests that this type are likely to manipulate and deceive others in order to accomplish personal gain in any given situation (McHoskey, 1999; Becker & Dan O'Hair, 2007; Dahling et al., 2009). These *Landmark Individualist Leader* CEOs are highly assertive in nature and with a high prevention locus so they are also likely make decisions without much hesitation and do not overlook details that might cause failure of their actions

(Higgins, 1997, 1998; Judge et al., 1997). It may well be said that these CEOs aim to be immaculate in their appearance, highly precise in choosing their words, and basically stay on the safe side as they seek to feel secure and play their moves so as not to lose instead of win (Higgins, 1997, 2000). This CEO type tends to score a little less than average on traits such as CSE, promotion focus, and pro-activity, which may be summarised as the type of people who are likely to feel satisfied in their positions and with their roles within the organisation, doing what is expected and not going any further and, with little pro-activeness, will maintain these individuals far from innovating (Judge et al., 2003; Higgins, 2000; Seibert et al., 2001). Just as this CEO archetype may be low in proactivity, they are likely to be low in political skills as these two traits were also shown to hold a positive relationship by the Seibert et al. (2001) study. Although most research done in the last century outlines those management strategies performed by Machiavellians as deceiving, manipulative, and unprincipled (Barker, 1994), Machiavellians are prone to lead with rigid authority and tend to be highly motivated to lead (Mael et al., 2001). Hence, these CEOs are then disposed to employ networks of relationships in order to achieve their goals. This archetype may employ a wide scope of leadership and influence schemes depending on their targets' personalities. Machiavellian leaders are very thorough in machinating their thoughts and are skilful at shaping power dynamics in complex organisations (Yukl et al., 2002). Thus, these individuals are rather low in honesty and humility, which boosts and complements their Machiavellianism as they are prone to act in shady and obscure ways in order to accomplish their goals. They may even be characterised as crooked and unscrupulous individuals (Becker & Dan O'Hair, 2007; Hambrick, 2007a; Chatterjee & Hambrick, 2011; Adler & Adler, 1989; Tangney, 2000).

Lastly, *Landmark Individualist Leaders* favour daring, assertive, and altruistic actions that are likely to draw attention to their vision and leadership only to the extent that it favours their personal gains, as their Machiavellian and assertive nature would forecast. Thus they are not likely to be found on the extremes of narcissistic or hubristic behaviour (Hambrick, 2007a; Seibert et al., 2001; Barker, 1994; Dahling et al., 2009; Hiller & Hambrick, 2005; Hayward & Hambrick, 1997). This preference has implications, sometimes positive, for firm strategy and performance.

The archetype described by the next cluster is more of what is expected of the *Independent Hero Leader*. CEOs who belong to this category are expected to be higher on psychological traits such as narcissism and promotion focus, which suggests that these individuals possess high self-esteem (Paunonen et al., 2006; Emmons, 1984; Higgins, 1997; Higgins & Spiegel, 2004). These are the type of CEOs who go through their work with a relentless optimism, always promoting the next big idea, creative and innovative as they like to experience new paths (Higgins, 2000; Seibert et al., 2001; Hambrick, 2007a; Judge et al., 2003). Due to their narcissistic psyches, this type of CEO is likely to label and praise most of their accomplishments and accentuate their positives (Bogart et al., 2004; Hambrick, 2007a). They also tend to possess high assertiveness and pro-activity along with highly assessed CSE, which are all thought to boost narcissistic and promotion focus-oriented psychological characteristics (Emmons, 1987; Seibert et al., 2001; Judge et al., 2003; Raskin & Terry, 1988). Traditional CEOs are considered to be highly charismatic, politically skilled, and socially influential. These are all desirable traits when thinking of an *Independent Hero Leader* as they will help create bonds along with their top management teams (TMTs) as well as help them construct the image they intend to show others (Ferris et al., 2005; Ahearn et al.,

2004; Agle et al., 2006; Finkelstein, 2009). Furthermore, Traditional CEOs are expected to be around the average population in regards of Machiavellianism, honesty, and humility and rather high on promotion focus. This then suggests that these individuals will do whatever it takes within the limits of legality to accomplish their goals, which are the organisation's (Higgins, 1998, 2000; Hambrick, 2007a; Chatterjee, 2011; Adler & Adler, 1989; Waldman et al., 2001). Hence, the latter traits aligned with an average CSE indicates that they will be more satisfied with their roles and positions than the rest of the archetypes; they will also be more self-confident and possess a rather strong belief in their ideas (Judge et al., 2003).

As commented previously, CEOs have great influence on strategic management resources based on the degree to which they shape their top team management members' behavioural composition, their ease and willingness to take risks, and how responsibilities are shared and accounted for. It is usual to encounter situations in which a firm's orientation with regard to entrepreneurial matters is largely addressed as a consequence of chief executive officers' perceptions that they are entitled to make decision. This is influenced by the individual's psychological characteristics (Hambrick, 2007a; Simsek, 2007; Hiller & Hambrick, 2005). The last archetype describes the *Classic Administrator Leader* or CEO, who is characterised by average levels of widely desirable traits in order to achieve favorable outcomes. For example, this type of CEO may wish to be lenient towards innovation and a good risk taker when the firm is adopting an entrepreneurial direction. However, risks should be taken with a thorough analysis of the possible scenarios as these risks should be minimised. Therefore, I expect the average CEO to have above-average traits of prevention rather than promotion focus (Higgins, 1997; Gamache et al., 2015; Simsek, Heavey, & Veiga, 2010). Moreover, the average CEO possesses low CSE as a common core and

proactiveness, to have the ability to promptly assess his/her own capabilities in order to properly evaluate strategic means when underpinning uncertainty or underachievement of a firm. They have the motivation to start to formulate and attend the strategic actions to follow (Seibert et al., 2001; Judge et al., 2003; Judge et al., 2002). Hence, in parallel to theorising by Judge et al. (2003), a positive self-concept is a core construct that marks the degree to which one favourably refers to oneself and the ability to shape the environment (Judge et al., 2003; Judge et al., 2002; Hiller & Hambrick, 2005; Hambrick, 2007a). Thus, it is no surprise that the *Classic Administrator Leader* is low in narcissism. The *Classic Administrator Leader* is characterised by above-average humility and honesty, which in turn may reinforce perceptions of them as skillful in promoting interpersonal relationships among their colleagues. They tend to be at the edge of being inspirational but rather are good at communicating with others in a direct and clear way (Ashton & Lee, 2005; Tangney, 2000; Exline et al., 2004; Hambrick, 2007a; Chatterjee, 2011). Likewise, having a relatively good or positive self-concept along with sufficiently humble behaviour strengthen leaders' ability to hold more optimistic outcomes and stronger cohesion of the labour force (Barrick et al., 2003; Barrick et al., 1993; Wowak et al., 2016). Notice as outlined above, the *Classic Administrator Leader's* psychological characteristics may be muted and seem to be unrecognisable, as they do not possess any particular behavioural traits in large quantities.

Thus the selection of a CEO should not be thought as independent from the situation through which an organisation is undergoing. As previous literature suggests (Wowak et al., 2016; Wiersema & Bantel, 1992; Waldman et al., 2001; Lovelace et al., 2017; Hayward & Hambrick, 1997; Hambrick, 2007a), an organisation's dynamic environment calls for the

need for different strategic leadership to successfully accomplish common goals. Thus, the intent is to outline the possible factors that may influence CEO archetype selection.

The Nomological Network of the Leader Typology

The emergent typology of CEOs outlined in this paper is inextricably linked to the research on leadership. The concept of leadership has been the subject of interest by many social disciplines since the Victorian period when world history was thought to be “the biography of great men” (Carlyle, 1907). It was with this conception of the greatness in someone that allowed the concept of leadership to be subject of theorising (Judge et al. 2002). Thus, leadership was thought to be a trait that was dependent on given qualities possessed by individuals. According to Judge et al. (2002), it was Terman’s study in 1904, one of the pioneers in trait theory in applied psychology, followed by the work of Bowden (1926) and Cowley (1931) who concur to conclude that the study of leadership rested its foundations in the study of psychological traits. Dictionary meanings for leadership include “Refers to the qualities that make someone good guidance, authority, governance or management” (Collins English Dictionary, 2018) or “the ability to lead or command a group or organise” (Oxford Dictionary, 2010), particularly within an organisation that holds the greater relevance to the scholars in management. Later on, efforts switched to studying leadership not only as a solely trait-related construct but also as a specific situation defined as effectiveness (Stogdill, 1948; Bass, 1990; Yukl & Van Fleet, 1992). It is noteworthy that all of the above disqualifications to the study of leadership through a trait lens as being far too simplistic do at some point rely on certain traits related to the idea of leadership (Judge et al., 2002).

Given the latter, it is no surprise then that the study of leadership evolved to a point of having constructs related to the sole act of leading. In the management arena, leadership was no longer studied from a trait-based perspective but as the study of supervisory leadership (House and Aditya, 1997) in the 1980s, dealing with task- and person-oriented behaviours of leaders (e.g. path – goal and contingency) as such individuals provide their subordinates with guidance and support and at the same time get involved in a feedback process. Then, scholars parted from this scope to direct their efforts at analysing leadership in organisations centred in Hambrick and Mason’s Upper Echelons Theory (1984). This new focus involved theories of charismatic leadership (Conger & Kanungo, 1987; House, 1976; Shamir et al., 1993), transformational leadership theories (Bass, 1985), and theories on visionary leadership (Kouzes & Posner, 1987). That is, the study of leadership developed into the modern approach, namely, strategic leadership, emanating from the creation of value and purpose for the organisation itself. That is, leadership migrated from being analysed as leadership *in* organisations to leadership *of* organisations as a unit incorporating their environment and capabilities (Selznick, 1985). Research on leadership has evolved to be studied through sole characteristics a rather exclusive populations of individuals within firms, the so-called top team management, who drive the strategic engine of the organisation, what these people do, and how they do things (Hambrick, 1989)

Leadership and Behaviours

Neocharismatic leadership is somehow related to the beginnings of the study of leadership but includes in the theory a set of psychological traits, behaviours and exogenous situations (Yukl & Van Fleet, 1992). Burns (1978) introduced the distinction between two

behavioural dimensions of leadership: so-called transformational and transactional leadership.

First, transformational leadership may be acquainted as an “idealised influence” in the way that leaders actions are driven by high moral standards and ethical conduct; they promote loyalty among their subordinates. Also, transformational leadership behaviours are inclusive of a strong future vision founded in the individual’s values and ideas and may be seen or named as inspirational motivation through promoting enthusiasm and confidence and by inspiring through actions and persuasive language (Bono & Judge, 2004). Notice that the two prior behaviours are closely related to charisma (Bass, 1998). Furthermore, transformational leadership is also intellectually stimulating behaviours such as being lenient in challenging norms and promoting diverse thinking and innovation (Bono & Judge, 2004).

Transactional leadership behaviours on the other side involve monitoring and controlling subordinates through rational or economic means (Bass, 1985). Transactional leaders should be skillful at providing resources and support for employees’ efforts and performance. In a similar fashion, this leadership style should be effective at performing corrective actions in order to avoid any deviation from standards and goals (Bono & Judge, 2004).

In 1980, Manz and Sims began research on analysing leadership in situations where there is a need for one to self-manage. Findings indicate that leaders of self-managing teams were more facilitative, consultative, and supportive than other leaders as opposed to organising, directing, and monitoring tasks that are embraced within all team members or subordinates (Manz & Sims, 1987).

However, Barling and colleagues (1996) show in their research how some of the transformational leadership behaviours may be learned through training approaches, which

might differ based on the individuals psyche. Furthermore, Bono & Judge in their 2004 research fail to link personality traits from the known Big Five to transformational and transactional behaviours, arguing that such behaviours are more transient, malleable, and less personality trait based.

Derived from the previous leadership behaviours, in the mid 1980s charismatic leadership was theorised as infatuating the interpersonal relationships of leaders with their subordinates or followers (Boal & Hooijberg, 2000). As charisma is a trait that is often linked to leadership and constantly appears in transformational leadership studies, it has been the standard to treat it as a single trait of TMT members to analyse the impact on several organisational outcomes. Boal and Bryson in 1988 suggested two different types of charisma, namely visionary and crisis responsive. The first dimension of charismatic leadership embraces core values, purposes, and meanings through an effective communication of vision and goals. The second dimension, the crisis responsive, deals with how to start the implementation of strategies in order to tackle crises effectively, although it may emerge temporarily when unfolding in critical scenarios (Gardner & Avolio, 1998). However, once again the construct of charismatic leadership surges from a specific environment and specifically attends to the need of dealing with crises or inspiring their followers to work united for a common goal and sharing a single vision rather than analysing where the antecedents of the individual's characteristics lie and how the individual was appointed for the task of being a leader.

Leadership and Personality Traits

Discussion has risen on debating the importance of such traits in order to understand how leaders proceed and how their actions and performance affect organisations. According to Bono & Judge (2004), personality and leadership are related. In their research, they appoint

several relationships from the Big Five traits to leadership. For example, regarding neuroticism, research has shown how low levels of neuroticism may indicate high self-confidence and high self-esteem and thus correlate positively to leadership and predicts good leadership effectiveness (Hill & Ritchie, 1977; Bass, 1990; Eysenck, 1990). Extraversion, for example, is a trait that has achieved much consensus as it has shown to be both negatively and positively related to leadership (Bass, 1990). However, theorists show evidence of the fact that extraversion is related to emergence of leaders in groups (Costa & McCrae, 1988; Hogan et al, 1994). Moreover, according to Gough (1990) extraverts relate more leadership effectiveness, as they possess both dominance and sociability, which comprise desirable traits within leaders. Openness is perhaps one of the most direct traits to originality and divergent thinking (Bass, 1990; McCrae, 1987). Thus, openness and therefore creativity have been appointed as important characteristics of effective leaders (Yukl, 1999). As Bass (1990) claimed in his research, conscientiousness is positively related to job performance and therefore related to leadership effectiveness (Bono & Judge, 2004). Thus, conscientious individuals are more tenacious and persistent delivering higher leader effectiveness. According to Bono and Judge, the relationship between agreeableness and leadership is still ambiguous as there has not been enough evidence to set the path clear (Bono & Judge, 2004). Although relationships between traits and leadership have been studied jointly and solely, the Five-Factor Model still seems far too simplistic to be a basis for emerging and effective leaders (Block, 1995; Hough, 1992).

Hence, it is common to find scholars describing traits as “bright” or “dark” (Smith et al., 2018) and assessing whether they have positive or negative effects on an organisation’s overall performance. However, although researchers have determined that those individuals

who possess high “dark” traits (such as narcissism or hubris) are more likely to move into leadership roles within the firm, it is the psychological composition that is the interaction of either both, bright and dark, traits and the extent to which an individual possess them that could well explain the characteristics of the actual leaders that will shape an organisation’s strategy.

Leader Typology and Leadership Styles

The typology of leaders outlined in this dissertation may be reminiscent of the leadership styles mentioned earlier in this discussion, and I will elaborate on the relationship and include points of similarity and distinction. First, the *Collaborative Champion Leader* may have similarities to the transformational leader style in the way that they both possess high levels of charisma and CSE; however, *Collaborative Champion Leaders* have the ability to also reproduce behaviours from the charismatic leadership style as they are able to generate cohesion and promote teamwork for decision making as they are open to ideas and possess high social influence and political skills (Judge & Bono, 2004). In a similar fashion, transactional leaders seem to possess features from the *Landmark Individualist* in the way that they may influence their subordinates to an extent to generate a process of manipulating team members in order to obtain performance and effort by formulating punishment-reward schemes or by employing their networks and economic gains to control performance (Bono & Judge, 2004). The *Independent Hero Leader* and the *Classic Administrator* also comply with these; however, they may be thought of as having some other features such as high narcissism for the first along with a high assertive nature, which makes them drift away from the pure transactional and transformational leadership styles. The *Classic Administrator*, for example, will tend to have a lower CSE, narcissism, and proactiveness than the average CEO

population, making this individual suitable to assess capabilities without taking the next big step but always promoting interpersonal skill and easing through communication blocks.

It's noteworthy that besides the lack of consensus and the common path of research that has directed its efforts into analysing such constructs given a specific situation within the organisation, there is little to the best of my knowledge about the antecedents or trait composition of the different leader archetypes that rise naturally from the population and that are distant and isolated from given situations or environments. This adds to the first studies of leadership and could further add to the extant modern research in strategic leadership.

CHAPTER IV

TOWARD A THEORY OF CEO SELECTION BASED ON PSYCHOLOGICAL CONFIGURATION

Literature Review of CEO Selection

Over the last three decades, scholars focused their efforts on analysing the traits and causes that determine CEO selection from an industry and firm standpoint. CEO succession is critical to an organisation's future as it poses many implications, so it is no surprise that firms need to effectively identify the most adequate candidate in order to ensure a smooth leadership transition and to promptly address firm strategy adaptation processes for current and future demands (Biggs, 2004; Berns & Klarner, 2017). Various research questions examine a wide variety of domains and methodologies; however, CEO selection and succession are not disjoint events, but conform to a rather continuous process that aims toward long-term commitments and sufficient preparation on behalf of the board in order to rapidly tackle any emergency scenarios. When thinking of the CEO replacement process, a pool of plausible candidates is usually appointed and assessed by the board prior to selection and hiring. Hence, after electing the best candidate among them all, boards tend to continuously monitor the executive's performance. It is therefore natural to think of the mere replacement event as having a narrow and limited scope to

thoroughly capture the whole succession process. Although this isolated research focus may prevail due to the ease with which data may be gathered in comparison to attempting to analyse the entire process, in practice a well-planned CEO succession is due to outperform an unplanned replacement (Hamori & Koyuncu, 2015).

Thus, the entire process of CEO succession consists of multiple steps. However, I specifically focus on the CEO selection step in this process. Extant research on this specific step primarily focuses on examining the factors, such as industry, firm, and board characteristics, that influence the type of demographic and background (i.e., origin) characteristics that selected CEOs possess.

Board Characteristics

A rich body of prior research shows that boards play a central role in the CEO succession process. As representatives of stakeholders, a firm's board is the governing figure and is therefore responsible for appointing and replacing CEOs when necessary (Fama & Jensen, 1983). However, boards are still weak in handling CEO succession effectively as they only react when a leadership crisis emerges instead of planning successions proactively. Hence, lack of succession planning has a major impact on organisations as it incurs increased costs due to CEO head hunting, board meetings, consultants, and other less visible costs such as those associated with employee uncertainty, delayed decision-making, and human capital loss (Hamori & Koyuncu, 2015).

Extant research shows how boards tend to attract and select CEOs with similar demographic profiles to their own (Zajac & Westphal, 1996). Friedman and Saul (1991) add further evidence on the belief that outsider successors could result in a threat to existing directors of the board when they are insiders to the firm as they could be replaced by the new

member. In a similar fashion, when the board is comprised of outside members, the likelihood of choosing an external successor is greater (Agrawal et al., 2006; Borokhovich et al, 1996). Social capital literature is widely influenced by social network theory (e.g., Adler & Kwon, 2002; Burt, 2000; Lin, 2002; Davidsson & Honig, 2003; Marsden, 1983; Portes & Sensenbrenner, 1993), which argues that social networks (understood as people with different levels of proximity) provide value in the form of new information, reciprocity, trust, and cooperation.

Industry Characteristics

External conditions, on the other hand, such as industry growth rates, technological intensity, and competitive intensity, among others, often create variability in demand requirements for firm success (Hambrick, 1981; Porter, 1980). Thus, as the environment changes, an organisation's needs will do so too.

A major arena of research that has evolved in parallel is that regarding CEO origin type; that is, research in CEO succession that explores the antecedents of CEOs in order to study the forerunners of having intra-firm or outside-firm succession (Finkelstein et al., 1996; Sebora & Kesner, 1996). In this research, evidence is shown that explains such phenomena due to strategic contingencies in the firm. From a theoretical perspective, having an outsider or insider CEO differs greatly as they possess different managerial skills. Research questions the extent to which these may be transferable across different firms or even industries, which is not always plausible. Thus, when hiring an insider CEO, the firm is involved in less risk concerning leadership change (Castanias & Helfat, 1991; Harris & Helfat, 1997). Moreover, a customary view is that insider successors have an advantage as board members already have detailed information regarding the individual and thus there is less information

asymmetry than when hiring an outsider (Harris & Helfat, 1997; Tian et al., 2011). Other studies demonstrate that insider successors provide social capital as the promoted executive has social ties to former work mates (Nahapiet & Ghoshal, 2000; Finkelstein, 2009; Zajac, 1990). Other literature suggests other benefits that may be obtained from outside industry succession as it may represent an opportunity with regard to organisational learning as the CEO may influence his former team to acquire new skills and improve team members' ability to recognise and promptly react to dynamic environmental conditions (Virany et al., 1992). This is relevant in two ways. First, the importance of the frequently overlooked antecedents and consequences of CEO selection on the fact that CEO psychology may block the benefits of organisational learning opportunities and thus may hinder top management teams' performance. Also, the degree to which the new CEO includes his or her team mates in the decision-making process or how they provide their team with new skills and how they may impact organisational strategic actions or even the environment depends greatly in more ways than just their background or selection antecedents.

Firm Characteristics

Research suggests a positive association between intrafirm succession and firm size, prior performance, and extant strong inside constituencies (Dalton & Kesner, 1983; Guthrie et al., 1997). For example, the odds of hiring an insider CEO are higher when the presuccessor's performance is better (Cannella & Lubatkin, 1993). This "prior performance" is associated with the previous CEO, and that makes boards lean toward strategic change (Guthrie et al., 1997; Graffin et al., 2013). Swartz and Menon (1985) show evidence of how outside succession holds a direct relationship with poor financial performance, creating a need for unbiased external expertise (Hambrick & Mason, 1984).

Other organisational-level factors such as size also influence CEO succession. We know that large firms are more prone to hiring insider CEOs as they have a larger pool of candidates from which to choose. They also incur higher succession frequency as greater bureaucracy implies obeying mandatory retirements (Guthrie et al., 1997; Dalton & Kesner, 1983; Lauterbach et al., 1999; Helmich & Brown, 1972).

Antecedents of the Selection of the Types of CEO Psychological Configurations

As argued earlier, CEO selection has been studied from industry and firm environmental scopes analysing succession in which a potential CEO's background presents certain behavioural traits. However, little effort has been made to analyse CEOs' psychological characteristics on succession events taking into account CEO archetypes as a whole (Biggs, 2004; Berns & Klarner, 2017). The intent in this section is to integrate and build on prior literature by specifying a set of selection outcomes pertaining to CEOs' specific archetypes given two main arenas: 1) selection of a given type of a CEO under a firm's specific needs according to the industry's specific attributes; 2) the pressure to select or retain the proper archetype or CEO needed in order to undertake tasks effectively adjusting to firm-level expectations such as size, board composition, or a given position of the firm's degree of leverage. To establish such connections, relationships between industry- and firm-related environmental factors are considered along with the CEO archetypes considered.

Board-Level Antecedents

As I commented earlier, scholars often discuss the relationship between boards and CEOs. CEOs are in charge of formulating and implementing strategies; on the other hand, the organisation's board is in charge of ratifying and monitoring the CEO's performance (Mizruchi, 1983; Walsh & Seward, 1990). Zajac and Westphal (1996) show that comment

boards are able to influence firm strategy by appointing CEOs, and they should also reduce uncertainty (Westphal & Fredrickson, 2001; Salancik & Pfeffer, 1978). For example, literature suggests that more powerful boards are known to commonly appoint CEOs demographically similar to them. In this case, outsiders are more similar to the board and dissimilar to the CEO preceding the last one (Zajac & Westphal, 1996). Other scholars claim those outsider CEOs are usually adept in maximising their personal welfare at the expense of shareholders interest (Boyd, 1994; Lewellen et al., 1985). Given that, and the fact that CEOs have great influence in strategic management resources and shaping their top team management behavioural mixtures, average levels of widely desirable traits come in handy in order to achieve favourable outcomes for the organisation. For example, CEOs need to be good risk takers by performing a thorough analysis of the possible outcomes. Therefore, it is expected that CEOs will have average traits of prevention and promotion foci (Higgins, 1997; Gamache et al., 2015; Simsek et al., 2010). Moreover, when unfolding under large or inexperienced boards, the leader should possess average CSE and be sufficiently proactive to properly formulate and evaluate strategies with minimum risk, seeking the firm's success rather than their own (Seibert et al., 2001; Judge et al., 2003; Judge et al., 2002; Hiller & Hambrick, 2005; Hambrick, 2007a; Dahling et al., 2009). Also, theory indicates that larger boards imply a greater challenge for CEO control (Ocasio, 1994) and that greater prior board experience is seen as a liability (Ocasio & Kim, 1999) when not having a visionary manager in command. Thus, the following three hypotheses are made.

Hypothesis 1a: Organisations with larger boards are more likely to select the *Classic Administrator Leader* as CEO.

Hypothesis 1b: Organisations with less experienced boards are more likely to select *Independent Hero Leader* as CEOs.

Hypothesis 1c: Organisations with more experienced boards are more likely to select the *Collaborative Champion Leader* as CEO.

Industry-Level Antecedents

Industry dynamism may be characterised by unexpected and sudden changes that lead to greater uncertainty for organisations and whoever unfolds in them (Duncan, 1972). The Keats and Hitt (1988) research claims that firms respond to more dynamic environmental conditions by creating simpler organisational structures. As a consequence of such dynamic environments, individuals are prone to suffer augmented stress and anxiety (Waldman et al., 2001). According to research, these symptoms may be eased by increasing top team management members' participation in the decision making process (Hambrick & Mason, 1984; Pearce, 2004). Furthermore, when performing in dynamic environments, individuals who pursue a thorough, rational decision-making process and consider various scenarios simultaneously are expected to perform better than those who do not. Likewise, those who simultaneously consider more alternatives tend to outperform those who do not (Judge & Miller, 1991; Glick et al., 1993). As claimed by Wowak et al. (2016), highly charismatic leaders will formulate strategic decisions in an unconventional manner and will have greater concern for social ideas (McCall, 1986; Shamir et al., 1993). Moreover, when underpinning uncertain environments, CEOs should be able to effectively influence firm strategy when they have the backing of their colleagues and superiors (Waldman & Yammarino, 1999; Lowe et al., 1996). Thus, a high self-esteem and rather narcissistic nature may come in handy; a CEOs highly assertive and pro-active nature may be highly instrumental without

imposing his/her own personal gain and goals over the organisation's (Emmons, 1984; Higgins, 1997, 2000; Higgins & Spiegel, 2004; Seibert et al., 2001; Hambrick, 2007a; Judge et al., 2003; McHoskey, 1999; Becker & Dan O'Hair, 2007; Dahling et al., 2009; Waldman et al., 2001; Cannella & Lubatkin, 1993). As such, the following hypothesis arises.

Hypothesis 2a: Organisations in more dynamic industries are more likely to select an *Independent Hero Leader* as CEO.

According to Dess and Beard (1984), other environmental dimensions of external influence to a firm are munificence and complexity. Munificence refers to considering an abundance of resources in the environment. For example, within technological savvy industries, the computer-manufacturing sector is considered a relatively munificent environment. Hence, the more munificent the industry, the less scarce are resources. Thus, munificence is considered in the literature to be negatively associated with uncertainty. On the other hand, environmental complexity is often employed among scholars as a measure of inequalities among competitors and is positively related to uncertainty (Dess & Beard, 1984). As was concluded by Aldrich's (2008) study, organisations competing in environments with higher complexity tend to demand more strategic decisions than those acting in less complex environments. Thus, it appears that for those firms trying to succeed in both munificent and complex environments, as more resources are available and more inequalities among competitors exist, firms strive to constantly innovate and stand out from former competitors. It appears that leaders' psychological characteristics should be aligned to promote innovation with a clear panorama of the risks at stake when striving to take the lead among former competitors (Higgins, 1997, 1998; Gamache et al., 2015). Notice that there are far more resources to consider when formulating new strategies with an openness to ideas (Ashton &

Lee, 2009; Hiller & Hambrick, 2005). As a good visionary with an eagerness to generate change, the candidate should be charismatic so greater participation to generate ideas on behalf of the entire TMT and cohesion among co-workers may occur (Waldman et al., 2001). Jointly, with the individual's high political skill, effectiveness is increased and growth promoted, as the individual possesses the ability to positively influence others (Ferris et al., 2005; Ahearn et al., 2004). As the intent is to foster TMT participation in order to achieve innovation through greater decision-making responsibility sharing, humble characteristics should be present, reporting a less narcissistic behaviour (Hambrick, 2007a). Then, as collective work on TMT settles goals for the organisation's welfare, the candidate should be lenient, possessing low Machiavellianism (Dahling et al., 2009). Thus, as a second selection proposition, the following is posed.

Hypothesis 2b: Organizations in more munificent industries are more likely to select the *Collaborative Champion Leader* as CEO.

As stated previously, environmental conditions such as competitive intensity or concentration often translate as larger variability concerning the requirements to achieve firm success. We understand that organisations' needs may vary along with conditions of the environment (Hambrick, 1981; Porter, 1980). Duncan (1972), for example, claimed that executives facing more complex environments are likely to experience greater uncertainty and thus have much more information to process than those individuals facing more homogeneous environments. Others, like Aldrich (2008), suggest that the more complex the environment, the greater the need for strategic activities. Machiavellian and high promotion, focus-oriented individuals, as discussed earlier, tend to be very strategic in how they structure their thinking, making them skillful in managing power dynamics when they are set

in more complex organisations. Machiavellians are prone to using a wide scope of leadership and influence strategies catering to their targets' psychological preferences (Higgins, 1997, 1998; Gamache et al., 2015; McCall, 1986; Deluga, 2001). Hence, as they tend to be able to influence their fellow team members to achieve their goals, the ideal leader for this environment is thought to possess high levels of charisma and social influence traits (Agle et al., 2006; Ferris et al., 2005; Ahearn et al., 2004). Thus, in order to generate change and achieve successful negotiations that will lead to their well being, these executives must be highly assertive, which will boost their Machiavellian and authoritarian natures (De Dreu et al., 2000; Galinsky & Mussweiler, 2001; Dahling et al., 2009; Kiazad et al., 2010; Bagozzi et al., 2013). Therefore, the following hypothesis is made.

Hypothesis 2c: Organisations in more complex industries are more likely to select the

Landmark Individualist Leader as CEO.

Firm-Level Antecedents

As discussed earlier, selection of leaders or CEOs in organisations is implicitly constrained by the organisation's structure itself and its social setting. Therefore, establishing whether the right individual is appointed is not independent from context or background (Lieberson & O'Connor, 1972). One of the factors that comprise such context is firm structure as it encompasses communication blocks, conflicts, and the degree of bureaucracy that is inherent to the organisation (Blau & Scott, 1962; Bowers & Seashore, 1966). These dimensions are certainly dependant on size of the firm (Dalton et al., 1998). For example, the extent to which the CEO has locus of control should depend on the size of the firm. Decision-making processes tend to happen more simply in smaller firms (Begley & Boyd, 1986, 1987). Hence, it has been established in prior literature that smaller firms should be lenient in

having a more mechanical structure and posing more conservative strategic postures (Covin & Slevin, 1989). Hence, according to Miller and Toulouse in their 1985 research, smaller firms usually select CEOs who are proactive to the extent that they are highly analytic and failure oriented (Miller & Toulouse, 1985); that is, individuals who perform better in these structures tend to be high in promotion focus (Higgins, 1997, 1998; Gamache et al., 2015). Moreover, when unfolding in small organisations, desirable behavioural traits should be present but without having any of these particular attributes. In contrast, more effective communication is needed when leading larger firms as is better information processes in order for one person to execute, then delegate responsibilities. So leaders in larger organisations need to be highly charismatic, open to new ideas, and have high social influence as well as political skills, but should always care for the well being of the firm (Hiller & Hambrick, 2005; Ferris et al., 2005; Ahearn et al., 2004; Judge et al., 1997; Seibert et al., 2001; Hambrick, 2007a; Chatterjee & Hambrick, 2011; Adler & Adler, 1989). That is, managerial leadership should be preferred in smaller firms over a visionary managerial style, which is thought to be more present in larger firms (Giambattista et al., 2005). Thus, the following two hypotheses are made.

Hypothesis 3a: Larger organisations are more likely to select the *Collaborative*

Champion Leader as CEO.

Hypothesis 3b: Smaller organisations are more likely to select the *Independent Hero*

Leader as CEO.

Since the late 1950s, starting with Modigliani and Miller (1985), capital structure research focused its efforts on studying the factors that determine corporate leverage. Empirical work analysed market, industry, and firm characteristics; however, similar

organisations in terms of these attributes are associated with different corporate leverage strategies (Cronqvist et al., 2012). According to Cronqvist et al., almost all prior studies implicitly assume that a firm's CEO has no direct relationship with corporate leverage decision-making if corporate governance structures constrain CEOs with greater discretionary controls (Cronqvist et al., 2012). Malmendier, Tate, and Yan (2010), on the other hand, claim that overconfident CEOs take on more debt. That is, the leader who is lenient in engaging more debt tolerant policies tends to be more hubristic or narcissistic than the average CEO (Paunonen et al., 2006; Emmons, 1984; Higgins, 1997; Higgins & Spiegel, 2004). Due to a narcissistic nature that requires making things happen, they also tend to possess high assertiveness and pro-activity, along with highly assessed CSE (Emmons, 1987; Seibert et al., 2001; Judge et al., 2003; Raskin & Terry, 1988). That is, more aggressive leadership styles have been judged by scholars to engage in more corporate leverage decisions (Bertrand & Schoar, 2003). Furthermore, less managerial discretion has also been associated with less openness and lower industry capital. Thus, a more traditional or managerial leader is to be selected in these firms as opposed to those with a more visionary approach (Datta et al., 2003; Giambattista et al., 2005). The following hypothesis is made.

Hypothesis 3c: Organisations with more leverage are more likely to select the

Independent Hero Leader as CEO.

Firm performance has been widely studied in the literature and has been acknowledged to be an important antecedent to CEO succession (Gamson & Scotch, 1964; Grusky, 1960). Kesner and Sebor (1994) comment on how an organisation's past performance may influence decision-making processes regarding succession. Other scholars are credited for attributing an outside succession to those firms that are characterised by poor past

performance (Wiersema & Bantel, 1992; Cannella & Lubatkin, 1993). Hence, a precedent has been set that CEO succession is a triggering event that urges a change in an organisation's strategic approach when performing metrics that are far from optimistic (Miller, 1993). In this fashion, low profitability and growth as well as poor performance have been associated with outsider CEO succession (Datta & Guthrie, 1994). Evidence shows that poor performance may be forecasted by observing job mismatch in CEO selection processes. For example, poor performance of a firm may be derived from having a bad match between CEO characteristics and those of the firm (Allgood & Farrell, 2003). Thus, firms should be wary of appointing an individual with a high Machiavellian approach as his/her efforts may be directed at achieving his/her personal goals, which are not necessarily the same as the firm's (Dahling et al., 2009). In contrast, when the organisation's past performance is good, boards are thought to direct their efforts into preventing the CEO in command from abuse of power and engaging in practices that may become unfavourable to the organisation or the shareholders' interests (Cannella & Shen, 2001). Thus, in order to create cohesion, consciousness, and the desired culture of honesty in achieving the organisation's goals within limits imposed by legality and the environment itself, traits like high charisma, social influence, and political skills are appreciated rather than those of Machiavellianism (Ferris et al., 2005; Ahearn et al., 2004; Agle et al., 2006; Finkelstein, 2009; Higgins, 1998, 2000; Hambrick, 2007a; Chatterjee & Hambrick, 2011; Adler & Adler, 1989; Waldman et al., 2001). Moreover, ideal leaders in this case ought to be able to accentuate their positives and exude sufficient authority to maintain the current strategy and culture that has yielded good performance in the past (Tushman & Romanelli, 1985; Zhang & Rajagopalan, 2003, 2004; Bogart et al., 2004; Hambrick, 2007a; Emmons, 1987; Seibert et al., 2001; Judge et al., 2003;

Raskin & Terry, 1988). Hence, the latter traits aligned with an average CSE will reinforce the fact that these individuals should be able to feel comfortable and satisfied with their roles and positions in organisations and with the status quo (Judge et al., 2003). Thus, the following hypothesis raises.

Hypothesis 3d: Organisations with high past performance are more likely to select the *Classic Administrator Leader* as CEO.

CHAPTER V

METHODS

Sample and Data Collection

This chapter describes the data collection procedures and the development of the variables of interest as well as the measures used for this study. The sample of the first study in this dissertation is comprised of the 250 S&P CEOs and will provide a first sample population for the study proposed. Because the focus of the second part of this study is CEO selection, I will exclude any CEOs from the initial sample of 250 who were selected for office within the given time frame. From this sample of selected CEOs, I will then collect information regarding CEO, board-, and firm-level data from a variety of sources, including Boardex, S&P's COMPUSTAT industrial data base, and the Executive Compensation database for Standard and Poor's 1000 firms, also known as the EXECUCOMP industrial database. The final sample will be comprised of CEOs who were selected for office between 1992 and 2016 for which CEO, board-, industry-, and firm-level data is complete.

Variables

Dependent Variable

The dependent variable for this study is defined as the likelihood of selecting a particular archetype of CEO as outlined in the first part of this study. This is to be operationalized as taking the value 1 if the CEO was a *Collaborative Champion Leader*, 2 if the CEO was a *Classic Administrator Leader*, 3 if the CEO was an *Independent Hero Leader*, and 4 if the CEO was a *Landmark Individualist Leader*.

Independent and Control Variables

The predictor variables or independent variable space includes: firm size measured as the natural logarithm of sales, and industry instability operationalized as the rate of sales growth in the industry (Finkelstein et al., 2009). Also, board demographic diversity is operationalized as the ratio of females to males, board experience as the average tenure of the board of directors, board independence as the ratio of outside board members to inside members, and board size measured as the total number of directors on the board (Core et al., 1999; Finkelstein & D'aveni, 1994; Finkelstein & Hambrick, 1989). The intent is to control for several variables that are often found in succession literature, including: prior firm performance, board age, firm level, industry complexity, and industry munificence.

Analysis

As the data represents a categorical value, multinomial logistic regression is pursued along with the use of indicator variables for the year. This approach permits comparisons among the forecast likelihood based on the alternative predictors of the model.

The Multinomial Logistic Regression Model

The main objective of this method is to estimate the probability of choosing each of the k possible categories as well as estimating the odds as a function of the corresponding covariates and to therefore assess the odds ratios of the category of choice. It wasn't until 1974 that McFadden suggested a modification of the logistics regression model, and it gave birth to the so-called discrete choice model, otherwise known as the multinomial, polychotomous, or polytomous logistic regression. In order to grasp greater understanding of the model, the intent of this section is to provide a brief review of the method, assuming that the response variable has four possible outcomes in a categorical fashion and with a nominal measurement scale. Let Y be the response variable. As noted earlier, Y has four possible outcomes denoted as $Y_1, Y_2, Y_3,$ and Y_4 . One of the possible families, for example, to which Y_1 belongs is often called the referent value or baseline. Then three logit functions are needed accordingly in order to compare each of the other categories to it. Further logit functions involving any other two categories pair-wisely not involving the baseline are also to be recalled later. These are merely a way of estimating the difference in the logit functions of each of the categories when compared to the baseline. Now, let $X_{n \times q}$ be a matrix comprised by a column vector with 1 valued entries for and the covariate matrix (assuming p independent variables in the model) such that $q = p + 1$. Hence, we denote the logit functions as:

$$\begin{aligned} g_k &= \ln \left[\frac{P(Y = k|X)}{P(Y = 1|X)} \right] \\ &= \beta_{k0} + \sum_{j=1}^p \beta_{kj} x_j \\ &= X' \beta_k \end{aligned}$$

for $k = 1, \dots, 4$. Thus, it follows that the conditional probability for each of the possible outcomes given the covariate vector is:

$$p(Y = k|X) = \frac{e^{g_k(x)}}{1 + \sum_j e^{g_j(x)}}.$$

For that of the baseline or referent

$$p(Y = 1|X) = \frac{1}{1 + \sum_j e^{g_j(x)}}.$$

In order to simplify notation, let now $\pi_k = P(Y = k|X)$, and then it must be satisfied that $\sum_{k=1}^4 \pi_k = 1$. So in order to estimate the model, the likelihood function L given a sample of size n is proposed as

$$L(\beta|X) = \prod_{i=1}^n [\pi_{1i}^{y_{1i}} \pi_{2i}^{y_{2i}} \pi_{3i}^{y_{3i}} \pi_{4i}^{y_{4i}}].$$

Then the log-likelihood is given by $l(\beta|X) = \ln(L)$ such that

$$l(\beta|X) = \sum_j \sum_i y_{ji} g_j(x_i) - \ln(1 + \sum_j e^{g_j(x_i)}).$$

Then by maximum likelihood estimation, taking first partial derivatives for the $2q$ parameters

$$\frac{\partial L(\beta)}{\partial \beta_{jk}} = \sum_i x_{ki} (y_{ji} - \pi_{ji})$$

then $\hat{\beta}$ is the estimator as it's the solution to setting the prior derivatives to zero and solving for $\hat{\beta}$. Second partial derivatives are obtained to compute the information matrix as it is an estimator for the covariance matrix among the estimators. The latter is in fact done by an iterative numerical procedure just as it's usually performed when fitting a logistic regression for a dichotomous response. Thus,

$$\text{Var}(\hat{\beta}) = (\hat{I}(\hat{\beta}))^{-1}.$$

Now, in order to interpret the estimates, the odds ratios are computed as follows.

$$OR_j(a, b) = \frac{\frac{P(Y = j|X = a)}{P(Y = 1|X = a)}}{\frac{P(Y = j|X = b)}{P(Y = 1|X = b)}}$$

That is, where $OR_j(a, b)$ indicates which family is being compared to the reference class given by $Y = 1$, for covariate values of a and b , respectively.

Goodness of Fit

In order to assess the goodness of fit, a contingency table of observed values and expected or predicted values is to be carried out in order to calculate the test statistic given by

$$\hat{C}_M = \sum_i \sum_j \frac{(O_{ij} - E_{ij})^2}{\widehat{E}_{ij}} \sim \chi^2_{(g-2) \times (k-1)}$$

under the assumption of the null hypothesis being a good model fit.

CHAPTER VI

RESULTS

For the data commented in the prior chapters, descriptive statistics and the correlation matrix may be seen in Table 2. Notice that most correlations yield values smaller than .43 in absolute value, which suggests that there would not be problems regarding collinearity among independent variables addressed in this study. It must be outlined that a reasonable number of iterations the log-likelihoods converged as such error covariance matrices are far from being nearly singular, discarding the need for model respecification. The Variance Inflation Factors (VIF) for the corresponding independent variables may be seen in Table 3 and collinearity issues are therefore discarded as the largest VIF reported is 2.27.

In order to test the proposed hypotheses in Chapter IV, I first ran an independent probit analysis (IP) for all types of Leaders. This analysis was used to determine which antecedent variables significantly predicted the likelihood of selecting each leader type. Then I ran a multinomial logit (MNL) analysis (with the *Classic Administrator Leader* as the referent class) in order to attain a more nuanced understanding of the likelihood of selecting among the different types. These are described in the next section. For the data gathered and the analyses described in the prior section, I present the Independent Probit

Table 2. Descriptive Statistics and Correlation Matrix

Panel A	Mean	S.D.	Min	Max	ncluster	firm_ age	pos_hist_ dis_ro	neg_hist_ dis_ro	log_sales	bod_ ind
Leader Type	2.26	1.02	1.00	4.00	1.00					
Firm Age	33.01	20.36	1.00	64.00	-0.11	1.00				
Positive Historical Discrepancy	0.02	0.09	0.00	1.11	-0.05	-0.01	1.00			
Negative Historical Discrepancy	-0.01	0.02	-0.16	0.00	0.00	0.06	0.12	1.00		
Firm Size	8.63	1.70	0.15	12.72	-0.02	0.51	0.03	0.10	1.00	
Board Independence	0.77	0.13	0.22	0.93	-0.06	0.29	-0.07	0.00	0.37	1.00
Board Size	11.38	2.65	6.00	22.00	0.12	0.24	-0.06	0.05	0.29	0.16
Board Gender Composition	0.15	0.08	0.00	0.42	-0.15	0.28	0.17	0.09	0.29	0.23
Board Age	61.01	3.33	49.50	69.60	0.07	0.34	-0.07	-0.02	0.29	0.20
Board Tenure	7.47	3.61	0.00	21.15	-0.10	0.26	-0.18	-0.14	-0.01	-0.18
Firm Leverage	0.85	9.80	-92.30	116.80	-0.02	-0.03	0.00	0.06	-0.03	0.04
Lagged Strategic Change	-0.56	0.79	-2.68	2.52	0.09	-0.35	0.10	-0.12	-0.43	-0.10
Industry Dynamism	1.06	0.07	1.00	1.66	-0.01	0.05	-0.04	-0.01	0.18	0.00
Industry Complexity	0.64	0.27	0.14	1.00	-0.01	0.07	-0.03	-0.04	0.17	0.03
Industry Munificence	1.10	0.40	0.57	6.28	0.03	0.01	-0.03	-0.01	0.07	-0.07

Panel B

	board_ female_ comp	avg_ directorage	avg_ timeonboard	fin_ ratio_ debtequity	lnsdytotal_ wowak2016	sic4dyn_ kh1988	sic4comp4_ db1984	sic4mun_ kh1988
Leader Type								
Firm Age								
Posititve Historical Discrepancy								
Negative Historical Discerpancy								
Firm Size								
Board Independence								
Board Size								
Board Gender Composition	1.00							
Board Age	-0.11	1.00						
Board Tenure	-0.02	0.31	1.00					
Firm Leverage	0.07	0.06	0.00	1.00				
Lagged Strategic Change	-0.08	-0.21	-0.23	-0.06	1.00			
Industry Dynamism	0.06	0.08	0.06	0.02	-0.08	1.00		
Industry Complexity	0.09	-0.05	-0.03	-0.12	0.02	0.42	1.00	
Industry Munificence	0.05	0.03	0.06	0.01	-0.10	0.59	0.13	1.00

Table 3. Variance Inflation Factors (VIFs)

Variables	VIF
Industry Dynamism	2.27
Industry Munificence	1.80
Firm Age	1.69
Firm Size	1.67
Board Size	1.47
Board Age	1.46
Industry Complexity	1.46
Board Tenure	1.44
Board Independence	1.37
Board Gender Composition	1.36
Lagged Strategic Change	1.31
Positive Historical Discrepancy	1.29
Negative Historical Discrepancy	1.27
Firm Leverage	1.15

(IP) and the Multinomial Logit (MNL) coefficients for leader choice as CEO in Tables 4 and 5, respectively.

As the model likelihood ratio statistics indicate, both the IP and MNL estimates fit the data well. Notice that Wald's χ^2 statistic in all cases is statistically significant, and therefore all models are statistically significant. Also, all the corresponding pseudo R^2 are approximately .20 or higher (except for those of the IP (M1 and M2)), and thus the models show a good fit of the model to the data. Notice M1 and M2 are also good explanatory models since it is a behavioural science. The most notable characteristic of such analyses is that both estimation methods yield considerably consistent results in terms of direction. Each estimation method produces almost the same count of statistically significant estimates except for those of board independence and industry complexity; the marginal effects derived from both analyses show same directionality.

Table 4. Probit

	M1	M2	M3	M4
	Collaborative Champion Leader	Classic Administrator Leader	Independent Hero Leader	Landmark Individualist Leader
Firm Age	-0.00 (0.01) [0.69]	0.01 (0.01) [0.12]	-0.01 (0.01) [0.30]	-0.01 (0.01) [0.48]
Positive Historical Discrepancy	1.28 (1.12) [0.25]	0.24 (1.03) [0.82]	0.68 (1.10) [0.54]	-9.55* (5.10) [0.06]
Negative Historical Discrepancy	6.44 (5.20) [0.22]	-10.53** (5.05) [0.04]	17.62* (10.59) [0.10]	-1.87 (5.80) [0.75]
Firm Size	-0.25*** (0.09) [0.01]	0.26*** (0.1) [0.01]	-0.02 (0.1) [0.87]	-0.01 (0.1) [0.93]
Board Independence	1.77 (1.12) [0.12]	-0.86 (1.03) [0.41]	1.92 (1.33) [0.15]	-2.36** (1.19) [0.05]
Board Size	0.04 (0.05) [0.47]	-0.10* (0.05) [0.07]	-0.12** (0.06) [0.03]	0.20*** (0.06) [0.00]
Board Gender Composition	0.77 (1.54) [0.62]	0.76 (1.55) [0.62]	-1.40 (1.60) [0.38]	-1.66 (2.16) [0.44]
Board Age	-0.00 (0.04) [0.96]	-0.13*** (0.04) [0.00]	0.12*** (0.05) [0.01]	0.07 (0.05) [0.13]
Board Tenure	0.11*** (0.04) [0.00]	-0.04 (0.04) [0.24]	0.01 (0.04) [0.80]	-0.04 (0.04) [0.37]
Firm Leverage	-0.02 (0.10) [0.81]	-0.10 (0.08) [0.19]	0.35** (0.14) [0.01]	-0.34 (0.23) [0.14]
Lagged Strategic Change	-0.03 (0.20) [0.88]	-0.35* (0.18) [0.05]	0.08 (0.17) [0.66]	0.39** (0.19) [0.05]
Industry Dynamism	-1.46 (2.57) [0.57]	1.36 (1.88) [0.47]	2.86 (1.77) [0.11]	-7.50*** (2.71) [0.01]
Industry Complexity	0.18 (0.59) [0.76]	-0.33 (0.53) [0.53]	-0.30 (0.59) [0.61]	1.27* (0.68) [0.06]
Industry Munificence	-1.54*** (0.57) [0.01]	0.54 (0.50) [0.29]	-0.20 (0.25) [0.43]	0.28 (0.56) [0.61]
Constant	2.08 (3.46) [0.55]	4.80* (2.50) [0.06]	-10.47*** (2.76) [0.00]	2.16 (3.54) [0.54]

	M1	M2	M3	M4
	Collaborative Champion Leader	Classic Administrator Leader	Independent Hero Leader	Landmark Individualist Leader
Observations	152	152	152	152
Wald's χ^2 (14)	25.46 (0.0303)	28.43 (0.0125)	30.02 (0.0076)	28.61 (0.0118)
Pseudo R ²	0.1249	0.1682	0.1817	0.2586
Log Pseudolikelihood	-74.801478	-84.055	-62.91	-50.38

Robust standard errors in brackets

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5. Multinomial Logit (Classic Administrator Leader)

	M5	M6	M7
	Collaborative Champion Leader	Independent Hero Leader	Landmark Individualist Leader
Firm Age	-0.02 (0.02) [0.28]	-0.02 (0.02) [0.16]	-0.02 (0.02) [0.21]
Positive Historical Discrepancy	1.21 (2.44) [0.62]	0.67 (2.49) [0.79]	-16.59 (13.76) [0.23]
Negative Historical Discrepancy	21.19* (11.35) [0.06]	41.52** (18.75) [0.03]	10.63 (12.03) [0.38]
Firm Size	-0.60*** (0.23) [0.01]	-0.3 (0.25) [0.22]	-0.3 (0.26) [0.25]
Board Independence	2.87 (2.2) [0.19]	3.59 (2.46) [0.14]	-2.73 (2.52) [0.28]
Board Size	0.20 (0.13) [0.13]	-0.05 (0.15) [0.76]	0.41*** (0.15) [0.01]
Board Gender Composition	-0.19 (3.08) [0.95]	-2.4 (3.54) [0.50]	-3.03 (3.94) [0.44]
Board Age	0.12 (0.09) [0.17]	0.30*** (0.10) [0.00]	0.23** (0.11) [0.03]
Board Tenure	0.19** (0.09) [0.04]	0.07 (0.10) [0.50]	0.01 (0.09) [0.92]
Firm Leverage	-0.04 (0.34) [0.91]	0.55** (0.26) [0.03]	-0.49 (0.47) [0.30]
Lagged Strategic Change	0.34 (0.39) [0.39]	0.42 (0.41) [0.31]	0.84* (0.45) [0.06]
Industry Dynamism	-3.44 (5.02) [0.49]	1.87 (4.06) [0.64]	-14.07** (7.03) [0.05]

	M5	M6	M7
	Collaborative Champion Leader	Independent Hero Leader	Landmark Individualist Leader
Industry Complexity	0.47 (1.16) [0.69]	-0.22 (1.22) [0.86]	2.1 (1.49) [0.16]
Industry Munificence	-2.57* (1.33) [0.05]	-0.67 (1.01) [0.50]	-0.29 (1.39) [0.84]
Constant	-1.20 (6.70) [0.86]	-18.59*** (6.24) [0.00]	1.29 (8.92) [0.89]
Observations	152	152	152
χ^2	87.98	87.98	87.98
	$p < 0.0001$		
Pseudo R ²	0.2167		
Likelihood	-158.98		

Standard errors in brackets

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In the first set of hypotheses regarding board characteristics, specifically Hypothesis 1a, “Organisations with larger boards are more likely to select the *Classic Administrator Leader* as the CEO,” is not supported. I found contradictory results as the IP model predicts a marginal negative relationship between the likelihood of choosing the *Classic Administrator Leader* and size of the board ($b = -.10$, $s.e. = .05$) with a p -value of .07. Moreover, when analysing the results for the MNL, there seems to be a non-significant effect of board size in the odds of selecting the *Classic Administrator Leader* as opposed to the *Collaborative Champion Leader* or the *Independent Hero* ($p > .1$). Moreover, the effect of board size on the likelihood of choosing the *Landmark Individualist CEO* over the *Classic Administrator* does appear to be significant ($b = .41$, $s.e. = .15$, $p < 0.01$), which is consistent with the fact that in the IP analysis the coefficient estimate yielded a negative relationship of the likelihood of choosing a *Landmark Individualist CEO* as board size tends to increase. Hence, from the IP it may be seen that the effect of having a larger board marginally impacts negatively the

likelihood of choosing an *Independent Hero* style of leader, as there exists a negative relationship between the later ($b = -.12$, $s.e. = .06$, $p < .05$).

As for Hypothesis 1b, “Organisations with less experienced boards are more likely to select the *Independent Hero Leader* as the CEOs,” both the IP (marginally) and MNL (as opposed to selecting a *Classic Administrator Leader*) models indicate that there is a positive marginal relationship between the likelihood of selecting such leaders and board age, which contradicts the hypothesised relationship ($b = .12$, $s.e. = .05$, $p = .03$ and $b = .30$, $s.e. = .10$, $p < 0.01$, respectively). For the last of the hypothesised relationships for board level, Hypothesis 1c, “Organisations with more experienced boards are more likely to select the *Collaborative Champion Leader* as the CEO,” the IP reveals a positive relationship on the likelihood of choosing the *Collaborative Champion* as the firm’s board is more experienced ($b = .11$, $s.e. = .04$, $p < .01$) holding all other variables constant. Moreover, the MNL shows in a similar fashion that the likelihood of choosing a *Collaborative Champion* as the firm’s board is more experienced in contrast to selecting the *Classic Administrator* is greater ($b = .19$, $s.e. = .10$, $p < .01$), and both findings consistently support the proposed hypothesis.

Moving into industry-level hypothesised relationships; first, Hypothesis 2a states that those organisations in more dynamic industries are more likely to select the *Independent Hero* kind of leader as the CEO. As it may be observed from both result tables, the hypothesis is not supported, as the estimate is statistically equal to zero. The corresponding p -values clearly suggest a lack of evidence to reject the null hypothesis of having no effect whatsoever of more dynamic environments on the likelihood of selecting this archetype of CEO. On the other hand, attention is drawn to consistent evidence of the fact that there is less likelihood of selecting the *Landmark Individualist* type of CEO both marginally and

compared to selecting the *Classic Administrator* as an industry's dynamism increases ($b = -7.50$, $s.e. = 2.71$, $p = .01$ and $b = -14.07$, $s.e. = 7.03$, $p = .05$, respectively). Concerning Hypothesis 2b, "Organisations in more munificent industries are more likely to select a *Collaborative Champion Leader* as the CEO," the IP model shows contradictory results from what I expected as the marginal effect of munificence in the industry over the likelihood of choosing a *Collaborative Champion* style of leader is indeed negative ($b = -1.54$, $s.e. = .57$, $p < 0.01$). That is, as the industry is more resourceful, the likelihood of choosing such CEOs reduces. Hence, the MNL model also provides insight that as the environment becomes more munificent, the likelihood of selecting a *Collaborative Champion* CEO as opposed to the *Classic Administrator* is smaller ($b = -2.57$, $s.e. = 1.33$, $p < .05$). Last, for Hypothesis 2c, "Organisations in more complex industries are more likely to select a *Landmark Individual Leader* as the CEO," the IP shows evidence that as the environment or industry turns more complex, the marginal likelihood of selecting such a leader is greater ($b = 1.27$, $s.e. = .68$, $p = .06$). On the other hand, the MNL does not provide further evidence to support this hypothesis of having greater likelihood of choosing a *Landmark Individualist* over a *Classic Administrator* type of CEO ($p > .1$).

The last set of hypotheses deal with firm-level attributes. For Hypothesis 3a, "Larger organisations are more likely to select a *Collaborative Champion Leader* as the CEO," the IP once again shows contradictory results from the expected relationship. It seems that the larger the organisation, the marginally less the likelihood of selecting a *Collaborative Leader* as CEO ($b = -.25$, $s.e. = .09$, $p = .01$). Similarly, the corresponding MNL model shows a negative effect between the size of the firm and the likelihood of selecting a *Collaborative Champion* over the *Classic Administrator Leader* ($b = -.60$, $s.e. = .23$, $p = .01$). Regarding

Hypothesis 3b; “Smaller organisations are more likely to select an *Independent Hero* as the CEO, the corresponding IP and MNL models fail to support the hypothesis as the yielded p -values turn out to be nonsignificant. For Hypothesis 3c, “Organisations with more leverage are more likely to select the *Independent Hero* type of leader as the CEO,” the IP do support the hypothesis and the marginal effect of having more leverage on the likelihood of selecting such a leader is positive ($b = .35$, $s.e. = .14$, $p = .01$). The MNL model, in contrast, shows a positive effect of leverage of the firm on the likelihood of selecting the *Independent Hero* type of leader as the CEO as opposed to the *Classic Administrator* CEO ($b = .55$, $s.e. = .26$, $p = .03$). Last, Hypothesis 3d, “Organisations with higher past performance are more likely to select the *Classic Administrator Leader* as the CEO”; the fact that the IP model yields a statistically significant negative coefficient provides insight that those firm who have reportedly performed better in past periods of time will be more likely to select the *Classic Administrator* ($b = -10.53$, $s.e. = 5.05$, $p = .04$). Likewise, the MNL model allows me to conclude that when past performance is good, the likelihood of selecting the *Classic Administrator* over the other leaders is indeed greater as the statistically significant estimates of the MNL models take this CEO archetype as the base category.

CHAPTER VII

DISCUSSION AND FURTHER RESEARCH

Among the findings exposed in the Results chapter of this document, some of the hypotheses proposed showed contradicting results and some enlightened new insights as alternative findings. Hypothesis 1a, for example, suggested that larger boards are more likely to select the *Classic Administrator* as CEO. However, the results showed contradictory evidence of this as the evidence in the data suggests that larger boards may be marginally less likely to select the *Classic Administrator* type as CEO. Moreover, as an alternative finding, there was significant positive relationship among the likelihood of selecting the *Landmark Individualist Leader* as board size increases. Research on board size indicates that increases in board size have the potential to be both detrimental and beneficial (Dalton et al., 1998). Some studies suggest that an increase a firm's access to resources (Pfeffer, 1972, 1973; Zahara & Pearce, 1989), while others suggest that larger board size inhibits effective monitoring of the CEO (Jensen, 1993; Mintzberg & Mintzberg, 1983) and collaboration efforts of board members (Lipton & Lorsch, 1992; Jensen, 1993). Therefore, smaller boards may be more effective at monitoring the CEO and also have a stable working relationship. Given the unextreme nature of the *Classic Administrator*, smaller boards that may have a more cohesive and stable working

relationship may favour a CEO with moderate traits as this type of CEO is unlikely to upset the dynamic among members of the board of directors. On the other hand, the results indicated that larger boards are more likely to select the *Landmark Individualist* CEO. Within larger boards there is a tendency for factions and coalitions to form, resulting in increases in group conflict. Increases in group conflict may pose a greater challenge for CEOs, especially those who do not possess strong social skills. Thus, larger boards may need CEOs who are able to form social bonds with the different factions of the board through coalition building, selective channelling of information, and dividing and conquering in order to effectively exert influence on strategy making (Alexander et al., 1993; Daily & Dalton, 1994; Dalton et al., 1998). Therefore, *Landmark Individualists*, due to their social ability, may be particularly appealing to large boards because they demonstrate the ability to gain advantage in power relations with the different factions of a larger board.

Regarding Hypothesis 1b, where the hypothesised relationship stated that more experienced boards were more likely to select the *Collaborative Champion* and less likely to select the *Independent Hero Leader* as CEO, results showed once again somewhat contradictory evidence. My analyses included variables measuring two related but distinct aspects of board experience. First, board age measures the general working experience of the board members with higher age indicating more years of work experience. Second, board tenure captured the average number of years that members had sat on the board of the focal firm, thus measured firm-specific experience. Consistent with my hypotheses, results suggest that as boards have more firm-specific experience (operationalized as board tenure), they are more likely to select the *Collaborative Champion* as CEO. However, contrary to my hypotheses, the results suggest that as boards have more general experience (operationalized

as board age), they are more likely to select the *Independent Hero* as CEO. Boards with higher age typically have more general work experience, but also tend to be more risk averse (Johnson et al., 2013). Because older boards are more risk averse, they may be more comfortable selecting leaders whose traits (i.e., charisma, narcissism, core self-evaluation) match up with the stereotypical leader attributes of masculinity and dominance; these traits are more typically found in the *Independent Hero* type. Therefore, older boards may favour the *Independent Hero* as CEO.

Although Hypothesis 2a was not supported, alternative findings were found suggesting that dynamic organisational environments reduce the likelihood of selecting the *Landmark Individualist* as CEO. This may be due to the fact that as the environment changes relatively fast, uncertainty raises, and CEOs should be effective in influencing organisational strategy (Waldman & Yammarino, 1999; Lowe et al., 1996). Thus, a highly assertive and proactive nature may be highly appreciated without imposing his personal gain and goals over the organisations (Emmons, 1984; Higgins, 1997, 2000; Higgins & Spiegel, 2004; Seibert et al., 2001; Hambrick, 2007a; Dahling et al., 2009).

Hypothesis 2b showed contradictory results to what was hypothesised as the evidence suggests that as the environment becomes more munificent the likelihood of selecting the *Collaborative Champion Leader* is reduced. According to Dess & Beard (1984), munificence is negatively associated with uncertainty as resources become less scarce and the need to have uncertainty underpinned is therefore reduced. Thus, a less munificent environment may be stable, translating into more relaxed and less stressful environment. Therefore, firms competing in this type of environment may benefit from a leader who is more nurturing,

more supportive, and more willing to foster teamwork and participation (Ashton & Lee, 2009; Hiller & Hambrick, 2005; Ferris et al., 2005; Ahearn et al., 2004; Hambrick, 2007a).

Hypothesis 3a indicated that the larger the firm, the more likely to select the *Collaborative Champion*. Nonetheless, results were once again contradictory. Data suggests that as organisation size increases, the likelihood of selecting a collaborative champion decreases. Larger firms tend to have a need for organisational efficiency, but are also prone to more communication blocks and thus a larger degree of bureaucracy (Blau & Scott, 1962; Bowers & Seashore, 1966; Dalton et al., 1998). Therefore, the *Collaborative Champion*, with excessive openness to ideas and fostering excessive participation in large organisations, may very well decrease productivity and hinder effective communication and strategic actions. On the other hand, the *Classic Administrator*, with unextreme traits, may be quite able to focus on tasks rather than relational roadblocks and be better equipped to overcome the bureaucracy of a larger organisation. Thus, this may help explain the results that suggest that larger firms are less likely to select the *Collaborative Champion* and more likely to select the *Classic Administrator* as CEO.

Future Directions

Several opportunities for future research may arise from this study. First, by employing Petrenko et al. (2016) video-metric methodology, scholars' have catered to the need to analyse the different psychological traits that may influence leadership perception, emergence, and effectiveness that have been studied since the early stages of research on leadership limited to single trait characteristics. The findings explained in this document shed light on the possibility of studying and analysing the antecedents of CEO selection based on a holistic approach by describing and inferring how and under what conditions each of the

different archetypes that emerged in the typology are selected. An interesting follow up to this study would be to examine how different stakeholders, such as the market, institutional investors, analysts, or the media, react to the hiring of the different CEO archetypes. It is reasonable to assume that organisational stakeholders may have different reactions to the hiring of different types of CEOs.

The leader typology developed in this manuscript opens the door to new possibilities to incorporate CEO antecedents into Upper Echelons Theory rather than only analysing the effects of given psychological and behavioural traits of top team management teams. Thus, an interesting line of research would be to examine the effect of the specific archetypes of leaders as CEO has on organisations' strategic actions as they may have discrepancies in the way they tackle uncertainty and on how they formulate, shape, and implement strategies.

Furthermore, this study examines the selection of CEOs based on their psychological configurations. A complementary line of inquiry would include examining CEOs' psychological configurations in executive dismissal or turnover. Perhaps certain configurations of executives are less likely to be dismissed or are less likely to intentionally step down from the position. Last, although evidence suggests that the different archetypes are selected under various scenarios due to their personality traits as a whole, another interesting line of research would seek to investigate and determine the impact of different compensation schemes on these profiles, unbundling the characteristics that may allow academics and practitioners to understand motivation in order to formulate proper human capital retention policies.

REFERENCES

- Adler, P.A. & Adler, P. (1989). The gloried self: The aggrandizement and the constriction of self. *Social Psychology Quarterly*, 299–310.
- Adler, P.A., & Kwon, S.W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27, 17-40.
- Afifi, A., May, S., & Clark, V.A. (2012). *Practical multivariate analysis*. Boca Raton FL: Chapman & Hall, CRC Press.
- Agle, B.R., Nagarajan, N.J., Sonnenfeld, J.A., & Srinivasan, D. (2006). Does CEO charisma matter? An empirical analysis of the relationships among organisational performance, environmental uncertainty, and top management team perceptions of CEO charisma. *Academy of Management Journal*, 49, 161–174.
- Agrawal, A., Knoeber, C.R., & Tsoulouhas, T. (2006). Are outsiders handicapped in CEO successions? *Journal of Corporate Finance*, 12, 619–644.
- Ahearn, K.K., Ferris, G.R., Hochwarter, W.A., Douglas, C., & Ammeter, A.P. (2004). *Leader political skill and team performance*. *Journal of management*, 30, 309–327.
- Aldrich, H. (2008). *Organizations and environments*. Redwood City CA: Stanford University Press.
- Alexander, J.A., Fennell, M.L., & Halpern, M.T. (1993). Leadership instability in hospitals: The influence of board-CEO relations and organizational growth and decline. *Administrative Science Quarterly*, 74-99.
- Allgood, S. & Farrell, K.A. (2003). The match between CEO and firm. *Journal of Business*, 76, 317–341.
- Ames, D.R., & Flynn, F.J. (2007). What breaks a leader: The curvilinear relation between assertiveness and leadership. *Journal of Personality and Social Psychology*, 92, 307.
- Ames, D.R., Rose, P., & Anderson, C.P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality*, 40, 440–450.
- Anderson, T.W. (2001). *An introduction to multivariate statistical analysis*. Hoboken NJ: Wiley.
- Ashton, M.C., & Lee, L.K. (2005). Honest – Humility, the Big Five, and the Five Factor Model. *Journal of Personality*, 73, 1321–1354.
- Ashton, M.C., & Lee, K. (2009). The hexaco–60: A short measure of the major dimensions of personality. *Journal of Personality Assessment*, 91, 340–345.
- Avolio, B.J., & Yammarino, F.J. (2013). Reflections, closing thoughts, and future directions. In *Transformational and charismatic leadership: The road ahead 10th anniversary edition* (pp. 449-470). Bingley U.K.: Emerald Group Publishing Limited
- Bagozzi, R.P., Verbeke, W.J., Dietvorst, R.C., Belschak, F.D., van den Berg, W.E., & Rietdijk, W.J. (2013). Theory of mind and empathic explanations of Machiavellianism: A neuroscience perspective. *Journal of Management*, 39, 1760– 1798.

- Barker, R.A. (1994). The rethinking of leadership. *Journal of Leadership Studies*, 1, 46-54.
- Barling, J., Weber, T., & Kelloway, E.K. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of Applied Psychology*, 81(6), 827.
- Barrick, M.R., Mount, M.K., & Strauss, J.P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology*, 78, 715.
- Barrick, M.R., Stewart, G.L., & Piotrowski, M. (2002). Personality and job performance: Test of the mediating effects of motivation among sales representatives. *Journal of Applied Psychology*, 87, 43.
- Bass, B.M. (1985). *Leadership and performance beyond expectations*. New York: Collier Macmillan.
- Bass, B.M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19-31.
- Bass, B.M. (1998). The ethics of transformational leadership. *Ethics, the Heart of Leadership*, 169-192.
- Becker, J.A., & Dan O'Hair, H. (2007). Machiavellian motives in organisational citizenship behaviour. *Journal of Applied Communication Research*, 35, 246-267.
- Begley, T.M., & Boyd, D.P. (1986). Executive and corporate correlates of financial performance in smaller firms. *Journal of Small Business Management*, 24, 8.
- Begley, T.M., & Boyd, D.P. (1987). Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses. *Journal of Business Venturing*, 2, 79-93.
- Berns, K.V., & Klarner, P. (2017). A review of the CEO succession literature and a future research program. *Academy of Management Perspectives*, 31, 83-108.
- Bertrand, M., & Schoar, A. (2003). Managing with style: The effect of managers on firm policies. *Quarterly Journal of Economics*, 118, 1169-1208.
- Biggs, E.L. (2004). CEO succession planning: An emerging challenge for boards of directors. *Academy of Management Executive*, 18, 105-107.
- Blau, P.M. & Scott, W.R. (1962). *Formal organizations: A comparative approach*. Redwood City CA: Stanford University Press.
- Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, 117(2), 187.
- Boal, K.B., & Bryson, J.M. (1988). *Charismatic leadership: A phenomenological and structural approach*. Lexington KY: DC Health and Company.
- Boal, K.B., & Hooijberg, R. (2000). Strategic leadership research: Moving on. *The Leadership Quarterly*, 11(4), 515-549.
- Bogart, L.M., Benotsch, E.G., & Pavlovic, J.D.P. (2004). Feeling superior but threatened: The relation of narcissism to social comparison. *Basic and Applied Social Psychology*, 26, 35-44.
- Bono, J.E., & Judge, T.A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology*, 89(5), 901.
- Borokhovich, K.A., Parrino, R., & Trapani, T. (1996). Outside directors and CEO selection. *Journal of Financial and Quantitative Analysis*, 31, 337-355.
- Bowden, A.O. (1926). A study of the personality of student leaders in colleges in the United States. *The Journal of Abnormal and Social Psychology*, 21(2), 149.
- Bowers, D.G., & Seashore, S.E. (1966). Predicting organisational effectiveness with a four-factor theory of leadership. *Administrative Science Quarterly*, 238-263.
- Boyd, B.K. (1994). Board control and CEO compensation. *Strategic Management Journal*, 15, 335-344.
- Brockner, J., & Higgins, E.T. (2001). Regulatory focus theory: Implications for the study of emotions at work. *Organizational Behaviour and Human Decision Processes*, 86, 35-66.
- Brockner, J., Higgins, E.T., & Low, M.B. (2004). Regulatory focus theory and the entrepreneurial process. *Journal of Business Venturing*, 19, 203-220.

- Burnham, P., & Anderson, R. (1998). *Model selection and inference - A practical information - theoretic approach*. New York: Springer.
- Burns, J.M. (1978). *Leadership*. New York: Harper and Row Publishing.
- Burt, R.S. (2000). The contingent value of social capital. In *Knowledge and Social Capital* (pp. 255-286). New York: Elsevier.
- Campbell, W.K., Goodie, A.S., & Foster, J.D. (2004). Narcissism, confidence, and risk attitude. *Journal of Psychological Decision Making*, 17, 297–311.
- Cannella, A.A., & Lubatkin, M. (1993). Succession as a sociopolitical process: Internal impediments to outsider selection. *Academy of Management Journal*, 36, 763– 793.
- Cannella Jr, A.A., & Rowe, W.G. (1995). Leader capabilities, succession, and competitive context: A study of professional baseball teams. *Leadership Quarterly*, 6, 69–88.
- Cannella, A.A., & Shen, W. (2001). So close and yet so far: Promotion versus exit for CEO heirs apparent. *Academy of Management Journal*, 44, 252–270.
- Carlyle, T. (1907). *The hero as divinity*. G. Bell.
- Castanias, R.P., & Helfat, C.E. (1991). Managerial resources and rents. *Journal of Management*, 17, 155–171.
- Chatterjee, A., & Hambrick, D.C. (2007). It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52, 351-386.
- Chatterjee A., & Hambrick, D.C. (2011). Executive personality, capability cues, and risk taking: How narcissistic CEOs react to their successes and stumbles. *Administrative Science Quarterly*, 56, 202–237.
- Chiu, T; Fang, D; Chen, J; Wang, Y; & Jeris, C. (2001). A robust and scalable cluster algorithm for mixed type attributes in large database environment. *Proceedings of the Seventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 263.
- Collins English Dictionary, 2018. Complete & unabridged 10th edition. <http://dictionary.reference.com/browse/leadership>.
- Conger, J. (1988). *Charismatic leadership*. Hoboken NJ: John Wiley & Sons, Ltd.
- Conger, J.A., & Kanungo, R.N. (1987). Toward a psychological theory of charismatic leadership in organisational settings. *Academy of Management Review*, 12, 637– 647.
- Conger, J.A., & Kanungo, R.N. (1998). *Charismatic leadership in organisations*. Thousand Oaks CA: Sage Publications.
- Connelly, B.S., & Hülshager, U.R. (2012). A narrower scope or a clearer lens for personality? Examining sources of observers advantages over self-reports for predicting performance. *Journal of Personality*, 80, 603–631.
- Core, J.E., Holthausen, R.W., and Larcker, D.F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, 51, 371–406.
- Costa, P.T., & McCrae, R.R. (1985). Persons, places, and personality: Career assessment using the revised NEO personality inventory. *Journal of Career Assessment*, 3(2), 123-139.
- Costa Jr, P.T., & McCrae, R.R. (1992). Four ways five factors are basic. *Personality and Individual Differences*, 13, 653–665.
- Covin, J.G., & Slevin, D.P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10, 75–87.
- Cowley, W.H. (1931). The traits of face-to-face leaders. *The Journal of Abnormal and Social Psychology*, 26(3), 304.
- Cronqvist, H., Makhija, A.K., and Yonker, S.E. (2012). Psychological consistency in corporate finance: CEO personal and corporate leverage. *Journal of Financial Economics*, 103, 20–40.
- Cycyota, C.S., & Harrison, D.A. (2006). What (not) to expect when surveying executives: A meta-analysis of top manager response rates and techniques over time. *Organizational Research Methods*, 9, 133–160.

- Dahling, J.J., Whitaker, B.G., & Levy, P.E. (2009). The development and validation of a new Machiavellianism scale. *Journal of Management*, 35, 219–257.
- Daily, C.M., & Dalton, D.R. (1994). Bankruptcy and corporate governance: The impact of board composition and structure. *Academy of Management Journal*, 37(6), 1603-1617.
- Dalton, D.R., Daily, C.M., Ellstrand, A.E., & Johnson, J.L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal*, 19, 269–290.
- Dalton, D.R., & Kesner, I.F. (1983). Inside/outside succession and organisational size: The pragmatics of executive replacement. *Academy of Management Journal*, 26, 736–742.
- Datta, D.K., & Guthrie, J.P. (1994). Executive succession: Organizational antecedents of CEO characteristics. *Strategic Management Journal*, 15, 569–577.
- Datta, D.K., Rajagopalan, N., & Zhang, Y. (2003). New CEO openness to change and strategic persistence: The moderating role of industry characteristics. *British Journal of Management*, 14, 101–114.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18, 301-331.
- De Dreu, C.K., Weingart, L.R., & Kwon, S. (2000). Influence of social motives on integrative negotiation: A meta-analytic review and test of two theories. *Journal of Personality and Social Psychology*, 78, 889.
- Deluga, R.J. (2001). American presidential Machiavellianism: Implications for charismatic leadership and rated performance. *Leadership Quarterly*, 12, 339– 363.
- Dess, G.G., & Beard, D.W. (1984). Dimensions of organisational task environments. *Administrative Science Quarterly*, 52–73.
- Duncan, R.B. (1972). Characteristics of organisational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, 313–327.
- Emmons, R.A. (1984). Factor analysis and construct validity of the narcissistic personality inventory. *Journal of Personality Assessment*, 48, 291–300.
- Emmons, R.A. (1987). Narcissism: theory and measurement. *Journal of Personality and Social Psychology*, 52, 11.
- Everitt, B.S; Landau, S; Leese, M; & Stahl, D. (2011). *Cluster analysis*. Hoboken NJ: Wiley.
- Exline, J.J., Baumeister, R.F., Bushman, B.J., Campbell, W.K., & Finkel, E.J. (2004). Too proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of Personality and Social Psychology*, 87, 894.
- Eysenck, H.J. (1990). Biological dimensions of personality. In L.A. Pervin (ed.), *Handbook of Personality: Theory and Research* (pp. 244-276). New York: Guilford Press.
- Fama, E.F., & Jensen, M.C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26, 301–325.
- Fanelli, A., Misangyi, V.F., & Tosi, H.L. (2009). In charisma we trust: The effects of CEO charismatic visions on securities analysts. *Organization Science*, 20, 1011-1033.
- Ferris, G.R., Treadway, D.C., Kolodinsky, R.W., Hochwarter, W.A., Kacmar, C.J., Douglas, C., & Frink, D.D. (2005). Development and validation of the political skill inventory. *Journal of Management*, 31, 126–152.
- Finkelstein, S. (2009). The effects of strategic and market complementarity on acquisition performance: Evidence from the US commercial banking industry, 1989–2001. *Strategic Management Journal*, 30, 617-646
- Finkelstein, S., & Boyd, B.K. (1998). How much does the CEO matter? The role of managerial discretion in the setting of CEO compensation. *Academy of Management Journal*, 41, 179–199.
- Finkelstein, S., & D’aveni, R.A. (1994). CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command. *Academy of Management Journal*, 37, 1079–1108.

- Finkelstein, S., & Hambrick, D.C. (1989). Chief executive compensation: A study of the intersection of markets and political processes. *Strategic Management Journal*, 10(2), 121-134.
- Finkelstein, S., Hambrick, D.C., & Cannella, A.A. (1996). *Strategic leadership*. St. Paul, MI.: West Publishing.
- Fraley, C., & Raftery, A.E. (1998). How many clusters? Which clustering method? Answers via model-based cluster analysis. *The Computer Journal*, 41, 578-588
- Friedman, S.D., & Saul, K. (1991). A leader's wake: Organization member reactions to CEO succession. *Journal of Management*, 17, 619-642.
- Galinsky, A.D., & Mussweiler, T. (2001). First offers as anchors: The role of perspective-taking and negotiator focus. *Journal of Personality and Social Psychology*, 81, 657.
- Gamache, D.L., McNamara, G., Mannor, M.J., & Johnson, R.E. (2015). Motivated to acquire? The impact of CEO regulatory focus on firm acquisitions. *Academy of Management Journal*, 58, 1261-1282.
- Gamson, W.A., & Scotch, N.A. (1964). Scapegoating in baseball. *American Journal of Sociology*, 70, 69-72.
- Gardner, W.L., & Avolio, B.J. (1998). The charismatic relationship: A dramaturgical perspective. *Academy of Management Review*, 23(1), 32-58.
- Gerstner, W.C., König, A., Enders, A., & Hambrick, D.C. (2013). CEO narcissism, audience engagement, and organisational adoption of technological discontinuities. *Administrative Science Quarterly*, 58, 257-291.
- Giambatista, R.C., Rowe, W.G., & Riaz, S. (2005). Nothing succeeds like succession: A critical review of leader succession literature since 1994. *Leadership Quarterly*, 16, 963-991.
- Glick, W.H., Miller, C.C., & Huber, G.P. (1993). The impact of upper-echelon diversity on organisational performance. *Organizational Change and Redesign*, 176, 214.
- Gosling, S.D., Rentfrow, P.J., & Swann Jr, W.B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504-528.
- Gough, H.G. (1990). California psychological inventory (CPI). *Gender roles: A handbook of Tests and Measures*, 42(4), 119.
- Graffin, S.D., Boivie, S., & Carpenter, M.A. (2013). Examining CEO succession and the role of heuristics in early-stage CEO evaluation. *Strategic Management Journal*, 34, 383-403.
- Graziano, W.G., Jensen-Campbell, L.A., & Hair, E.C. (1996). Perceiving interpersonal conflict and reacting to it: The case for agreeableness. *Journal of Personality and Social Psychology*, 70, 820.
- Grusky, O. (1960). Administrative succession in formal organisations. *Social Forces*, 39, 105-115.
- Guillén, M., & González, T.F. (2001). The ethical dimension of managerial leadership two illustrative case studies in TQM. *Journal of Business Ethics*, 34, 175-189.
- Gupta, A., & Misangyi, V.F. (In Press). Follow the leader (or not): The influence of peer CEOs' characteristics on inter-organisational imitation. *Strategic Management Journal*.
- Guthrie Datta, J.P., & Deepak, K. (1997). Contextual influences on executive selection: Firm characteristics and CEO experience. *Journal of Management Studies*, 34, 537-560.
- Hackett, R.D., & Wang, G. (2012). Virtues and leadership: An integrating conceptual framework founded in Aristotelian and Confucian perspectives on virtues. *Management Decision*, 50, 868-899.
- Hambrick, D.C. (1981). Environment, strategy, and power within top management teams. *Administrative Science Quarterly*, 253-275.
- Hambrick, D.C. (1989). Guest editor's introduction: Putting top managers back in the strategy picture. *Strategic Management Journal*, 10(S1), 5-15.
- Hambrick, D.C. (2007a). It's all about me : Executive officers and company strategy and performance. *Administrative Science Quarterly*, 52, 351-386.
- Hambrick, D.C. (2007b). Upper echelons theory: An update. *Academy of Management Review*, 32, 334-343.

- Hambrick, D.C., & Mason, P.A. (1984). Upper echelons: The organisation as a reflection of its top managers. *Academy of Management Review*, 9, 193–206.
- Hambrick, D.C., & Quigley, T.J. (2014). Toward more accurate contextualization of the CEO effect on firm performance. *Strategic Management Journal*, 35, 473–491.
- Hamori, M., & Koyuncu, B. (2015). Experience matters? The impact of prior CEO experience on firm performance. *Human Resource Management*, 54, 23–44.
- Hannan, M.T., & Freeman, J. (1977). The population ecology of organisations. *American Journal of Sociology*, 82, 929–964.
- Harris, D., & Helfat, C. (1997). Specificity of CEO human capital and compensation. *Strategic Management Journal*, 895–920.
- Hayward, M. (2007). *Ego check: Why executive hubris is wrecking companies and careers and how to avoid the trap*. New York: Kaplan Publishing.
- Hayward, M.L., & Hambrick, D.C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly*, 42, 103.
- Hayward, M.L., Rindova, V.P., & Pollock, T.G. (2004). Believing one's own press: The causes and consequences of CEO celebrity. *Strategic Management Journal*, 25, 637–653.
- Helmich, D.L., & Brown, W.B. (1972). Successor type and organisational change in the corporate enterprise. *Administrative Science Quarterly*, 371–381.
- Higgins, E.T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280.
- Higgins, E.T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In *Advances in experimental social psychology*, Volume 30 (pp. 1–46). New York: Elsevier.
- Higgins, E.T. (2000). Making a good decision: Value from fit. *American Psychologist*, 55, 1217.
- Higgins, E.T., & Spiegel, S. (2004). Promotion and prevention strategies for self-regulation: A motivated cognition perspective. In R.F. Baumeister, K.D. Voh (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 171-187). New York: Guilford Press.
- Hill, N.C., & Ritchie, J.B. (1977). The effect of self-esteem on leadership and achievement: A paradigm and a review. *Group & Organization Studies*, 2(4), 491-503.
- Hiller, N.J., & Hambrick, D.C. (2005). Conceptualizing executive hubris: The role of (hyper) core self evaluations in strategic decision making. *Management Decision*, 26, 297–319.
- Hogan, R., Curphy, G.J., & Hogan, J. (1994). What we know about leadership: Effectiveness and personality. *American Psychologist*, 49(6), 493.
- Hough, L.M. (1992). The “Big Five” personality variables--construct confusion: Description versus prediction. *Human Performance*, 5(1-2), 139-155.
- House, R.J. (1976). A 1976 theory of charismatic leadership. Working Paper Series 76-06, Toronto University.
- House, J. (1977). *A model for translation quality assessment* (Vol. 88). Amsterdam, The Netherlands: John Benjamins Publishing Co.
- House, R.J., & Aditya, R.N. (1997). The social scientific study of leadership: Quo vadis? *Journal of Management*, 23(3), 409-473.
- Jensen, M.C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance*, 48(3), 831-880.
- Johann, B., Wenzig, K., & Volger, M. (2004). SPSS two-step cluster: A first evaluation. *Arbeits- und Diskussionspapiere des Lehrstuhls für Soziologie*, 2.
- Johnson, S.G., Schnatterly, K., & Hill, A.D. (2013). Board composition beyond independence: Social capital, human capital, and demographics. *Journal of Management*, 39(1), 232-262
- Johnson, R., & Wichern, D.W. (2007). *Applied statistical multivariate analysis*. Upper Saddle River NJ: Prentice Hall.
- Judge, T.A., & Bono, J.E. (2001). Relationship of core self-evaluations traits—Self-esteem, generalized self-efficacy, locus of control, and emotional stability—With job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80.

- Judge, T.A., Erez, A., Bono, J.E., & Thoresen, C.J. (2003). The core self-evaluations scale: Development of a measure. *Personnel Psychology*, *56*, 303–331.
- Judge, T.A., Locke, E.A., & Durham, C.C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, *19*, 151–188.
- Judge, W.Q., & Miller, A. (1991). Antecedents and outcomes of decision speed in different environmental context. *Academy of Management Journal*, *34*, 449–463.
- Keats, B.W., & Hitt, M.A. (1988). A causal model of linkages among environmental dimensions, macro organisational characteristics, and performance. *Academy of Management Journal*, *31*, 570–598.
- Kern, J.M. (1982). Predicting the impact of assertive, empathic-assertive, and nonassertive behaviour: The assertiveness of the asserter. *Behavior Therapy*, *13*, 486–498.
- Kesner, I.F., & Sebor, T.C. (1994). Executive succession: Past, present & future. *Journal of Management*, *20*, 327–372.
- Khurana, R. (2002). The curse of the superstar CEO. *Harvard Business Review*, *80*, 60–6.
- Kiazad, K., Restubog, S.L.D., Zagenczyk, T.J., Kiewitz, C., & Tang, R.L. (2010). In pursuit of power: The role of authoritarian leadership in the relationship between supervisors Machiavellianism and subordinates a perceptions of abusive supervisory behaviour. *Journal of Research in Personality*, *44*, 512–519.
- Kouzes, J.M., & Posner, B.Z. (1987). *The leadership challenge: How to get extraordinary things done in organizations*. San Francisco: Google Scholar.
- Lanaj, K., Chang, C.H., Johnson, R.E. (2012). Regulatory focus and work-related outcomes: A review and meta-analysis. *Psychological Bulletin*, *138*, 998.
- Lauterbach, B., Vu, J., & Weisberg, J. (1999). Internal vs. external successions and their effect on firm performance. *Human Relations*, *52*, 1485–1504.
- Lewellen, W., Loderer, C., & Rosenfeld, A. (1985). Merger decisions and executive stock ownership in acquiring firms. *Journal of Accounting and Economics*, *7*, 209–231.
- Li, J., & Tang, Y. (2010). CEO hubris and firm risk taking in China: The moderating role of managerial discretion. *Academy of Management Journal*, *53*, 45–68.
- Liebertson, S., & O'Connor, J. F. (1972). Leadership and organisational performance: A study of large corporations. *American Sociological Review*, *117*–130.
- Lin, N. (2002). *Social capital: A theory of social structure and action*, Vol. 19. Cambridge U.K.: Cambridge University Press.
- Lipton, M., & Lorsch, J.W. (1992). A modest proposal for improved corporate governance. *The Business Lawyer*, 59-77
- Lord, R.G., De Vader, C.L., & Alliger, G.M. (1986). A meta-analysis of the relation between personality traits and leadership perceptions: An application of validity generalization procedures. *Journal of Applied Psychology*, *71*, 402.
- Lovelace, J., Bundy, J., Hambrick, D., & Pollock, T. (2017). The shackles of CEO celebrity: Sociocognitive and psychological role constraints on “star” leaders. *Academy of Management Review*, 2016.
- Lowe, K.B., Kroeck, K.G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly*, *7*, 385–425.
- Mael, F.A., Waldman, D.A., & Mulqueen, C. (2001). From scientific work to organisational leadership: Predictors of management aspiration among technical personnel. *Journal of Vocational Behavior*, *59*, 132–148.
- Mallows, C.L. (1973). Some comments on C p. *Technometrics*, *15*, 661-675.
- Malmendier, U., & Tate, G. (2009). Superstar CEOs. *Quarterly Journal of Economics*, *124*, 1593–1638.
- Malmendier, U., Tate, G., & Yan, J. (2010). *Managerial beliefs and corporate financial policies*. Cambridge MA: National Bureau of Economic Research.

- Manz, C.C., & Sims Jr, H.P. (1980). Self-management as a substitute for leadership: A social learning theory perspective. *Academy of Management Review*, 5(3), 361-367.
- Manz, C.C., & Sims Jr, H.P. (1987). Leading workers to lead themselves: The external leadership of self-managing work teams. *Administrative Science Quarterly*, 106-129.
- Marsden, P.V. (1983). Restricted access in networks and models of power. *American Journal of Sociology*, 88, 686-717.
- McCall, M.W. (1986). Leadership and performance beyond expectations, by Bernard M. Bass. Book Review, *Human Resource Management*, 25, 481-484.
- McCrae, R.R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52(6), 1258.
- McHoskey, J.W. (1999). Machiavellianism, intrinsic versus extrinsic goals, and social interest: A self-determination theory analysis. *Motivation and Emotion*, 23, 267-283.
- Meindl, J.R., Ehrlich, S.B., & Dukerich, J.M. (1985). The romance of leadership. *Administrative Science Quarterly*, 78-102.
- Milbourn, T.T. (2003). CEO reputation and stock-based compensation. *Journal of Financial Economics*, 68, 233-262.
- Miller, D. (1993). Some organisational consequences of CEO succession. *Academy of Management Journal*, 36, 644-659.
- Mintzberg, H., & Mintzberg, H. (1983). *Power in and around organizations* (Vol. 142). Englewood Cliffs NJ: Prentice-Hall.
- Mizruchi, M.S. (1983). Who controls whom? An examination of the relation between management and boards of directors in large American corporations. *Academy of Management Review*, 8, 426-435.
- Modigliani, F., & Miller, M.H. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48, 261-297.
- Nahapiet, J., & Ghoshal, S. (2000). Social capital, intellectual capital, and the organisational advantage. In *Knowledge and social capital* (pp. 119-157). Amsterdam, The Netherlands: Elsevier.
- Ocasio, W. (1994). Political dynamics and the circulation of power: CEO succession in US industrial corporations, 1960-1990. *Administrative Science Quarterly*, 285-312.
- Ocasio, W., & Kim, H. (1999). The circulation of corporate control: Selection of functional backgrounds of new CEOs in large US manufacturing firms, 1981-1992. *Administrative Science Quarterly*, 44, 532-562.
- Oh, I.S., Wang, G., & Mount, M.K. (2011). Validity of observer ratings of the five-factor model of personality traits: A meta-analysis. *Journal of Applied Psychology*, 96, 762.
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19, 39-52.
- Ou, A.Y., Tsui A.S., Kinicki A.J., Waldman D.A., Xiao Z., L.H. Song (2014). Humble chief executive officers' connections to top management team integration and middle managers' responses. *Administrative Science Quarterly*, 59, 34-72.
- Owens, B.P. (2009). The utility of humility in organisations: Establishing construct, nomological, and predictive validity. In *Academy of Management Proceedings*, 1-6.
- Owens, B.P., Johnson, M.D., & Mitchell, T.R. (2013). Expressed humility in organisations: Implications for performance, teams, and leadership. *Organization Science*, 24, 1517-1538.
- Oxford Dictionary (2018). New York: Oxford University Press. <http://oxforddictionaries.com>
- Patel, P.C., & Cooper, D. (2014). The harder they fall, the faster they rise: Approach and avoidance focus in narcissistic CEOs. *Strategic Management Journal*, 35, 1528-1540.
- Paunonen, S.V., Lönnqvist, J.E., Verkasalo, M., Leikas, S., & Nissinen, V. (2006). Narcissism and emergent leadership in military cadets. *Leadership Quarterly*, 17, 475- 486.
- Pearce, C.L. (2004). The future of leadership: Combining vertical and shared leadership to transform knowledge work. *Academy of Management Executive*, 18, 47-57.

- Peterson, R.S., Smith, D.B., Martorana, P.V., & Owens, P.D. (2003). The impact of chief executive officer personality on top management team dynamics: One mechanism by which leadership affects organisational performance. *Journal of Applied Psychology*, 88, 795.
- Petrenko, O.V., Aime, F., Ridge J., Hill, A. (2016). Corporate social responsibility or CEO narcissism. *Strategic Management Journal*, 37, 262–279.
- Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organization and its environment. *Administrative Science Quarterly*, 218-228.
- Pfeffer, J. (1973). Size, composition, and function of hospital boards of directors: A study of organization-environment linkage. *Administrative Science Quarterly*, 349-364.
- Porter, M.E. (1980). *Competitive strategy: Techniques for industries and competition*. New York: Free Press.
- Portes, A., & Sensenbrenner, J. (1993). Embeddedness and immigration: Notes on the social determinants of economic action. *American Journal of Sociology*, 98, 1320-1350.
- Puffer, S.M., & Weintrop, J.B. (1991). Corporate performance and CEO turnover: The role of performance expectations. *Administrative Science Quarterly*, 1-19.
- Quigley, T.J., & Hambrick, D.C. (2015). Has the “CEO effect” increased in recent decades? A new explanation for the great rise in America's attention to corporate leaders. *Strategic Management Journal*, 36, 821-830.
- R Core Team (2012). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing.
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, 54, 890.
- Rein, I.J., Kotler, P., & Stoller, M.R. (1987). *High visibility*. New York: Dodd, Mead & Company.
- Resick, C.J., Whitman, D.S., Weingarden, S.M., & Hiller, N.J. (2009). The bright-side and the dark-side of CEO personality: Examining core self-evaluations, narcissism, transformational leadership, and strategic influence. *Journal of Applied Psychology*, 94, 1365.
- Salancik, G.R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 224–253.
- Sanders, W.G. (2001). Behavioral responses of CEOs to stock ownership and stock option pay. *Academy of Management Journal*, 44, 477-492.
- Sanders, W.G., & Hambrick, D.C. (2007). Swinging for the fences: The effects of CEO stock options on company risk taking and performance. *Academy of Management Journal*, 50, 1055–1078.
- Schwartz, K.B., & Menon, K. (1985). Executive succession in failing firms. *Academy of Management Journal*, 28, 680–686.
- Schwarz, G. (1978). Estimating the dimension of a model. *The Annals of Statistics*, 6, 461-464.
- Sebora, T.C., & Kesner, I.F. (1996). The CEO selection decision process: Bounded rationality and decision component ordering. *Journal of Multi-Criteria Decision Analysis*, 5, 183–194.
- Seibert, S.E., Kraimer, M.L., & Crant, J.M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology*, 54, 845–874.
- Selznick, P. (1985). Focusing organizational research on regulation. *Regulatory Policy and the Social Sciences*, 1, 363-367.
- Seo, J., Choi, D., & Ou, A.Y. (2015). Middle manager turnover: The joint effects of top managers and top management teams. In *Academy of Management Proceedings*, 1, 15770.
- Shamir, B., House, R.J., & Arthur, M.B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, 4, 577–594.
- Shapira, Z. (1995). *Risk taking: A managerial perspective*. New York: Russell Sage Foundation.
- Simsek, Z. (2007). CEO tenure and organisational performance: An intervening model. *Strategic Management Journal*, 28, 653–662.
- Simsek, Z., Heavey, C., & Veiga, J.J.F. (2010). The impact of CEO core self-evaluation on the firm's entrepreneurial orientation. *Strategic Management Journal*, 31, 110–119.

- Simsek, Z., Veiga, J.F., Lubatkin, M.H., & Dino, R.N. (2005). Modeling the multilevel determinants of top 53 management team psychological integration. *Academy of Management Journal*, 48, 69–84.
- Smith, M.B., Hill, A.D., Wallace, J.C., Recendes, T., & Judge, T.A. (2018). Upsides to dark and downsides to bright personality: A multidomain review and future research agenda. *Journal of Management*, 44(1), 191-217.
- SPSS Inc. (2001). The SPSS two step cluster component: A scalable component to segment your customers more effectively. White paper - Technical report. Chicago: SPSS Inc.
- Stogdill, R.M. (1948). Personal factors associated with leadership: A survey of the literature. *The Journal of Psychology*, 25(1), 35-71.
- Tangney, J.P. (2000). Humility: Theoretical perspectives, empirical findings and directions for future research. *Journal of Social and Clinical Psychology*, 19, 70–82.
- Terman, L.M. (1904). A preliminary study in the psychology and pedagogy of leadership. *The Pedagogical Seminary*, 11(4), 413-483.
- Thomas, J.B., Clark, S.M., & Gioia, D.A. (1993). Strategic sensemaking and organisational performance: Linkages among scanning, interpretation, action, and outcomes. *Academy of Management Journal*, 36, 239–270.
- Tian, J.J., Haleblian, J.J., & Rajagopalan, N. (2011). The effects of board human and social capital on investor reactions to new CEO selection. *Strategic Management Journal*, 32, 731–747.
- Tushman, M., & Romanelli, E. (1985). Organizational evolution: Interactions between external and emergent processes and strategic choice. *Research in Organisational Behaviour*, 8, 171–222.
- Van Iddekinge, C.H., Raymark, P.H., & Roth, P.L. (2005). Assessing personality with a structured employment interview: Construct-related validity and susceptibility to response inflation. *Journal of Applied Psychology*, 90, 536.
- Venables, W.N., & Ripley, B.D. (2002). *Modern Applied Statistics with S*, fourth edition. New York: Springer. ISBN 0-387-95457-0.
- Virany, B., Tushman, M.L., & Romanelli, E. (1992). Executive succession and organisation outcomes in turbulent environments: An organisation learning approach. *Organization Science*, 3, 72–91.
- Wade, J.B., Porac, J.F., Pollock, T.G., & Graffin, S.D. (2006). The burden of celebrity: The impact of CEO certification contests on CEO pay and performance. *Academy of Management Journal*, 49, 643–660.
- Wagner III, J.A. (1995). Studies of individualism-collectivism: Effects on cooperation in groups. *Academy of Management Journal*, 38(1), 152-173.
- Waldman, D.A., Ramirez, G.G., House, R.J., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of Management Journal*, 44, 134–143.
- Waldman, D.A., & Yammarino, F.J. (1999). CEO charismatic leadership: Levels-of- management and levels-of-analysis effects. *Academy of Management Review*, 24, 266– 285.
- Walsh, J.P., & Seward, J.K. (1990). On the efficiency of internal and external corporate control mechanisms. *Academy of Management Review*, 15, 421–458.
- Walster, E., Aronson, V., Abrahams, D., & Rottman, L. (1966). Importance of physical attractiveness in dating behaviour. *Journal of Personality and Social Psychology*, 4, 508.
- Walter, H.L., Anderson, C.M., & Martin, M.M. (2005). How subordinates' Machiavellianism and motives relate to satisfaction with superiors. *Communication Quarterly*, 53, 57–70.
- Wang, G., Holmes, R.M., Oh, I.S., & Zhu, W. (2016). Do CEOs matter to firm strategic actions and firm performance? A meta-analytic investigation based on upper echelons theory. *Personnel Psychology*, 69, 775–862.
- Ward Jr, J.H. (1963). Hierarchical grouping to optimize an objective function. *Journal of the American Statistical Association*, 58, 236-244.

- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The panas scales. *Journal of Personality and Social Psychology*, *54*, 1063.
- Weisbach, M.S. (1988). Outside directors and CEO turnover. *Journal of Financial Economics*, *20*, 431-460.
- Westphal, J.D., & Fredrickson, J.W. (2001). Who directs strategic change? Director experience, the selection of new CEOs, and change in corporate strategy. *Strategic Management Journal*, *22*, 1113–1137.
- Wickham, H. (2009). *Ggplot2: Elegant graphics for data analysis*. New York: Springer.
- Wiersema, M.F., & Bantel, K A. (1992). Top management team demography and corporate strategic change. *Academy of Management Journal*, *35*, 91–121.
- Wilson, K., & Gallois, C. (1993). *Assertion and its social context*, Volume 27. New York: Psychology Press.
- Wowak, A.J., & Hambrick, D.C. (2010). A model of person-pay interaction: how executives vary in their responses to compensation arrangements. *Strategic Management Journal*, *31*, 803–821.
- Wowak, A.J., Mannor, M.J., Arrfelt, M., & McNamara, G. (2016). Earthquake or glacier? How CEO charisma manifests in firm strategy over time. *Strategic Management Journal*, *37*, 586–603.
- Wright, P., Kroll, M., & Elenkov, D. (2002). Acquisition returns, increase in firm size, and chief executive officer compensation: The moderating role of monitoring. *Academy of Management Journal*, *45*, 599–608.
- Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *The Leadership Quarterly*, *10*(2), 285-305.
- Yukl, G., Gordon, A., & Taber, T. (2002). A hierarchical taxonomy of leadership behaviour: Integrating a half century of behaviour research. *Journal of Leadership & Organizational Studies*, *9*, 15–32.
- Yukl, G., & Van Fleet, D. (1992). *Theory and research on leadership in organizations*. Palo Alto CA: Consulting Psychologist Press.
- Zahara, S.A., & Pearce, J.A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, *15*(2), 291-334.
- Zajac, E.J. (1990). CEO selection, succession, compensation and firm performance: A theoretical integration and empirical analysis. *Strategic Management Journal*, *11*, 217–230.
- Zajac, E.J., & Westphal, J.D. (1996). Who shall succeed? How CEO/board preferences and power affect the choice of new CEOs. *Academy of Management Journal*, *39*, 64–90.
- Zhang, Y., & Rajagopalan, N. (2003). Explaining new CEO origin: Firm versus industry antecedents. *Academy of Management Journal*, *46*, 327–338.
- Zhang, Y., & Rajagopalan, N. (2004). When the known devil is better than an unknown god: An empirical study of the antecedents and consequences of relay CEO successions. *Academy of Management Journal*, *47*, 483–500.
- Zhang, Y., & Rajagopalan, N. (2010). Once an outsider, always an outsider? CEO origin, strategic change, and firm performance. *Strategic Management Journal*, *31*, 334–346.
- Zhang, T., Ramakrisnon, R., & Livny, M. (1996). Birch: An efficient data clucluser method for very large databases. *Proceedings of the ACM SIGMOD Conference on Management of Data* (pp. 103– 114).
- Zhu, D.H., & Chen, G. (2015). CEO narcissism and the impact of prior board experience on corporate strategy. *Administrative Science Quarterly*, *60*, 31–65

APPENDIX

I. Charisma

A. Agle et al., 2006: Dynamic Leadership (7 point Likert scale)

1. Has the ability to excite a group of people.
2. Is charismatic.
3. Communicates an exciting vision of the future for his or her organisation.

B. Agle et al., 2006: Exemplary Leadership (7 point Likert scale)

1. Is trustworthy.
2. Sets a good example.
3. Provides a good model for others to follow.
4. Will not sacrifice his or her moral standards.

C. Waldman et al. 2001: (5 point Likert scale with anchors ranging from "not at all" to "frequently, if not always")

1. I have confidence in him or her.
2. He or she makes people feel good to be around him or her.
3. He or she generates respect.

D. Judge et al., 2003: CSE (7 point Likert scale)

1. The individual is confident they will get the success they deserve in life.
2. When the individual tries they will generally succeed.
3. The individual completes tasks successfully.
4. The individual feels in control of their work.
5. The individual is satisfied with their self.
6. The individual has doubts about their competence (R).
7. The individual determines what will happen in their life.
8. The individual is in control of their career success.
9. The individual is capable of coping with most problems.

II. Positive and Negative Affect

A. Watson et al., 1988: Positive and Negative Affect (Rating of the following on a 5 point Likert scale with the following anchors: "very slightly or not at all", "a little", "moderately", "quite a bit" and "extremely". (NA) indicates a negative affect.)

1. Interested.
2. Distressed (NA).
3. Excited.
4. Upset (NA).
5. Strong.
6. Guilty (NA).
7. Scared (NA).
8. Hostile (NA).
9. Enthusiastic.
10. Proud.
11. Irritable (NA).
12. Alert.
13. Ashamed (NA).
14. Inspired.
15. Nervous (NA).
16. Determined.
17. Attentive.
18. Jittery (NA).
19. Active.
20. Afraid (NA).

III. Assertiveness

A. Ames and Flynn, 2007: Assertiveness (7 point Likert scale)

1. He or she is assertive.
2. He or she is competitive, aggressive.
3. He or she is passive, submissive. (Reverse)

B. Rating from informants.

- i. He or she is extraverted, outgoing.

IV. Machiavellianism (Dahling et al. 2009)

A. Ammorality sub-scale

1. The individual believes that lying is necessary to maintain a competitive advantage over others.
2. The individual is willing to be unethical if the individual believes it will help him or her succeed.
3. The individual is willing to sabotage the efforts of other people if they threaten his or her goals.
4. The individual would cheat if there was a low chance of getting caught.

B. Desire for control sub-scale

1. The individual likes to give the orders in interpersonal situations.

2. The individual enjoys having control over other people.
 3. The individual enjoys being able to control the situation.
- C. Desire for status sub-scale
1. The individual believes that status is a good sign of success in life.
 2. Accumulating wealth is an important goal for the individual.
 3. The individual wants to be rich and powerful.
- D. Distrust of others sub-scale
1. The individual feels that people are only motivated by personal gain.
 2. The individual dislikes committing to groups because the individual does not trust others.
 3. The individual believes that other people are always planning ways to take advantage of the situation at his or her expense.
- V. Attractiveness
- A. Walster et al. 1966: Attractiveness (8 point unbalanced Likert scale ranging from "extremely unattractive" to "extremely attractive")
1. This person is:
- B. Ohanian 1990: Attractiveness (7 point semantic differential scale)
1. Attractive – Unattractive.
 2. Classy – Not classy.
 3. Beautiful – Ugly.
 4. Elegant – Plain.
 5. Sexy – Not sexy.
- C. Rating from informants.
1. I like this person.
 2. I would like to hang out with this person.
- VI. Political skill
- A. Political Skill Inventory: Ferris et al. 2005 (7 point Likert scale)
1. The individual is able to make most people feel comfortable and at ease around him or her.
 2. The individual is able to communicate easily and effectively with others.
 3. The individual is easy to develop good rapport with.
 4. The individual understands people very well.
 5. When communicating with others, the individual tries to be genuine in what the individual says and does.
 6. The individual is good at getting people to like him or her.
 7. The individual tries to show a genuine interest in other people.
 8. The individual has good intuition or savvy about how to present him or herself to others.
 9. The individual seems to instinctively know the right things to say or do to influence others.

VII. Honesty

A. Honesty: HEXACO – 60 scale (7 point Likert scale)

1. (H6). I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
2. (H12). If I knew that I could never get caught, I would be willing to steal a million dollars. (Reverse coded)
3. (H30). If I want something from someone, I will laugh at that person's worst jokes. (reverse coded)
4. (H36). I would never accept a bribe, even if it were very large.
5. (H54). I wouldn't pretend to like someone just to get that person to do favours for me.
6. (H60). I'd be tempted to use counterfeit money, if I were sure I could get away with it. (Reverse coded)

VIII. Humility

A. HEXACO – 60 scale (7 point Likert scale)

1. (H18). Having a lot of money is not especially important to me.
2. (H24). I think that I am entitled to more respect than the average person is. (Reverse coded)
3. (H42). I would get a lot of pleasure from owning expensive luxury goods. (Reverse coded)
4. (H48). I want people to know that I am an important person of high status. (Reverse coded)

IX. Social Influence

A. Ames and Flynn, 2007: Social influence (7 point scale ranging from "Never" "Rarely," "Infrequently," "Neutral," "Sometimes," "usually," and "Always")

1. He or she is able to direct and steer meetings in his or her favour.
2. He or she is able to persuade other people and change their opinions.
3. He or she is able to build effective working relationships with others who have different opinions or interests.
4. He or she tries to win arguments by dominating the discussion. (Reverse coded)
5. The substance of his or her messages gets lost because of how they are communicated. (Reverse coded)

B. Social Influence: Wiseman et al. (2012).

1. This person seems particularly able to influence others.
2. Pro-activeness

C. Seibert, et al., 2001: Pro-activeness (7 point scale ranging from "Strongly disagree", to "strongly agree")

1. The individual is constantly on the lookout for new ways to improve his or her life.
2. The individual loves being a champion for his or her ideas, even against others? opposition.
3. The individual is always looking for better ways to do things.

4. If the individual believes in an idea, no obstacle will prevent him or her from making it happen
- D. Pro-activeness: Wiseman et al. (2012).
1. This individual is proactive.
 2. Regulatory focus
- E. XXXX., XXXX: Regulatory focus (Rating of the following on a 7 point Likert scale)
1. In general, I am focused on preventing negative events in my life. ii. I am anxious that I will fall short of my responsibilities and obligations.
 2. I frequently imagine how I will achieve my hopes and aspirations. 88
 3. I often think about the person I am afraid I might become in the future.
 4. often think about the person I would ideally like to be in the future.
 5. I typically focus on the success I hope to achieve in the future.
 6. I often worry that I will fail to accomplish my academic goals.
 7. I often think about how I will achieve academic success.
 8. I often imagine myself experiencing bad things that I fear might happen to me.
 9. I frequently think about how I can prevent failures in my life.
 10. I am more oriented toward preventing losses than I am toward achieving gains.
 11. My major goal in school right now is to achieve my academic ambitions.
 12. My major goal in school right now is to avoid becoming an academic failure.
 13. I see myself as someone who is primarily striving to reach my ideal self to fulfil my hopes, wishes, and aspirations.
 14. I see myself as someone who is primarily striving to become the self I ought to be to fulfil my duties, responsibilities, and obligations.
 15. In general, I am focused on achieving positive outcomes in my life.
 16. I often imagine myself experiencing good things that I hope will happen to me.
 17. Overall, I am more oriented toward achieving success than preventing failure.
- X. Narcissism
- A. Ames et al., 2006: Narcissism (7 point Likert scale)
1. I know that I am good because everyone keeps telling me so.
 2. I like to be the centre of attention.
 3. I think I am a special person.
 4. I like having authority over other people.
 5. I find it easy to manipulate people.
 6. I insist upon getting the respect that is due me.
 7. I will usually show off if I get the chance.
 8. I always know what I am doing.
 9. Everybody likes to hear my stories.
 10. I expect a good deal from other people.
 11. I really like to be the centre of attention.
 12. People always seem to recognise my authority.
 13. I am going to be a great person.
 14. I can make anybody believe anything I want them to.

15. I am more capable than other people.

B. Campbell et al., 2004: Narcissism (7 point Likert scale)

1. This person is an exhibitionist.
2. This person seems to crave for admiration from others.
3. This person's attitude and style are somehow grandiose.
4. This person seems to have a tendency to diminish others.
5. This person believes in his or her own superiority.
6. This person thinks he or she is more creative than others.
7. This person thinks he or she is more intelligent than others.
8. This person thinks he or she is a better leader than others.
9. This person thinks he or she is more competent than others.

C. Narcissism CITE: (5 point Likert scale with anchors ranging from "not at all" to "frequently, if not always")

1. This individual has an inflated view of himself or herself.
2. This individual is narcissistic.

R Code

VITA

Carlos Arturo Serna Garcini

Candidate for the Degree of

Doctor of Philosophy

Dissertation: IT'S WHO YOU ARE: EXPLAINING THE ANTECEDENTS OF NEW
CEOS' PSYCHOLOGICAL PROFILES

Major Field: Business Administration

Education:

Completed the requirements for the Doctor of Philosophy in Business
Administration at Oklahoma State University, Stillwater, Oklahoma in July,
2018.

Completed the requirements for the Master of Science in Business
Administration at Instituto Tecnológico Autónomo de México in 2013

Completed the requirements for the Bachelor of Science in Mathematics at
Instituto Tecnológico Autónomo de México, Mexico City in 2010.